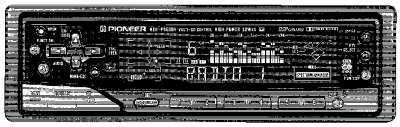
Service Manual

PIONEER®
The Art of Entertainment

KEH-P8600R/EW



ORDER NO.
CRT2011

MULTI-CD CONTROL HIGH POWER CASSETTE PLAYER WITH CD/DSP TUNER

KEH-P8600R EW

MULTI-CD CONTROL HIGH POWER CASSETTE PLAYER WITH RDS TUNER

KEH-P7600R EW

NOTE:

- **See the separate manual CX-631(CRT1640) for the cassette mechanism description.**
- **The cassette mechanism assy employed in this model is one of X-2L series**
- **Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation. "Dolby" and the double-D symbol are trademarks of Dolby Laboratories Licensing Corporation.**
- **This model has no CD test mode.**
  For the operations in the CD test mode, refer to the CD player's Service Manual.
- **This device employs an inverter as the power supply for EL. The inverter has an output voltage reach approximately 200 volts(AC). Utmost care should be used not to suffer from a possible electric shock, accordingly.**

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1. SAFETY INFORMATION

This service manual is intended for qualified service technicians; it is not meant for the casual do-it-yourselfer.
Qualified technicians have the necessary test equipment and tools, and have been trained to properly and safely repair complex products such as those covered by this manual.
Improperly performed repairs can adversely affect the safety and reliability of the product and may void the warranty.
If you are not qualified to perform the repair of this product properly and safely, you should mot risk trying to do so and refer the repair to a qualified service technician.

2. EXPLODED VIEWS AND PARTS LIST

2.1 PACKING

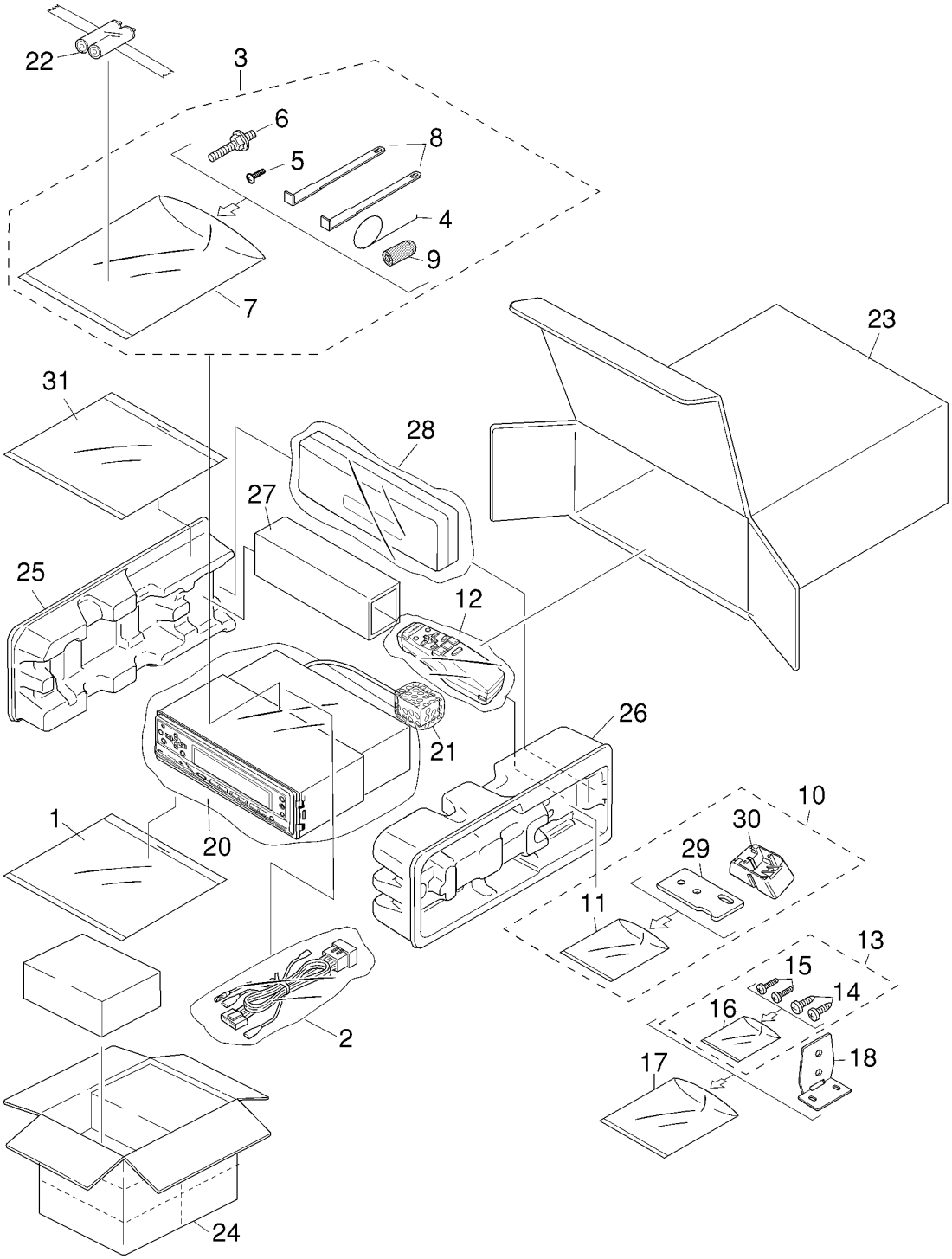


Fig. 1

NOTE:

● Parts marked by "＊"are generally unavailable because they are not in our Master Spare Parts List.

● Screws adjacent to ▼ mark on the product are used for disassembly.

(1)PARTS LIST

Mark	No.	Description	Part No.
	1-1	Polyethylene Bag	CEG1116
	1-2	Owner's Manual	See Contrast table
	1-3	Owner's Manual	See Contrast table
	1-4	Installation Manual	See Contrast table
	1-5	Installation Manual	See Contrast table
	1-6	Installation Manual	See Contrast table
＊	1-7	Warranty Card	CRY1087
＊	1-8	Label	CRW1343
	1-9	Passport	CRY1033
	2	Cord Assy	CDE5339
	3	Accessory Assy	CEA2065
	4	Spring	CBH-865
	5	Screw	CBA1120
	6	Screw	CBA1284
＊	7	Polyethylene Bag	CEG-158
	8	Handle(x2)	CNC5395
	9	Bush	CNV1009
	10	Base Assy	CEA2344
	11	Polyethylene Bag	CZE3188
	12	Remote Control Assy	CXB1156
	13	Screw Assy	CZE3198
	14	Screw(x2)	BNC40P120FZK
	15	Screw(x2)	BPZ30P100FZK
＊	16	Polyethylene Bag	CEG-127
＊	17	Polyethylene Bag	CZE3201
	18	Bracket	CZN6467
	19	·····	
	20	Polyethylene Bag	CEG-162
	21	Air Cushioned Bag	CEG1192
	22	Battery	CEX1006
	23	Carton	See Contrast table
	24	Contain Box	See Contrast table
	25	Protector	CHP1687
	26	Protector	CHP1688
	27	Spacer	CHW1433
	28	Case Assy	CXA7194
＊	29	Sheet	CZN3371
＊	30	Base	CZN6466
	31-1	Owner's Manual	See Contrast table
	31-2	Polyethylene Bag	CEG1116

(2) CONTRAST TABLE

KEH-P8600R/EW and KEH-P7600R/EW have the same construction except for the following:

Mark No.	Symbol & Description	Part No. KEH-P8600R/EW	Part No. KEH-P7600R/EW
1-2	Owner's Manual	CRD2382	CRD2397
1-3	Owner's Manual	CRD2383	CRD2398
1-6	Installation Manual	CRD2385	CRD2400
1-7	Installation Manual	CRD2415	CRD2417
1-8	Installation Manual	CRD2416	CRD2418
12	Remote Control Assy	CXB1156	CXB1157
23	Carton	CHG3302	CHG3306
24	Contain Box	CHL3302	CHL3306
31-1	Owner's Manual	CRD2384	CRD2399

● Owner's Manual

Model	Part No.	Language
KEH-P8600R/EW	CRD2382	English, Spanish
	CRD2383	German, French
	CRD2384	Italian, Dutch
KEH-P7600R/EW	CRD2397	English, Spanish
	CRD2398	German, French
	CRD2399	Italian, Dutch

● Installation Manual

Model	Part No.	Language
KEH-P8600R/EW	CRD2385	English, Spanish
	CRD2415	German, French
	CRD2416	Italian, Dutch
KEH-P7600R/EW	CRD2400	English, Spanish
	CRD2417	German, French
	CRD2418	Italian, Dutch

2.2 EXTERIOR

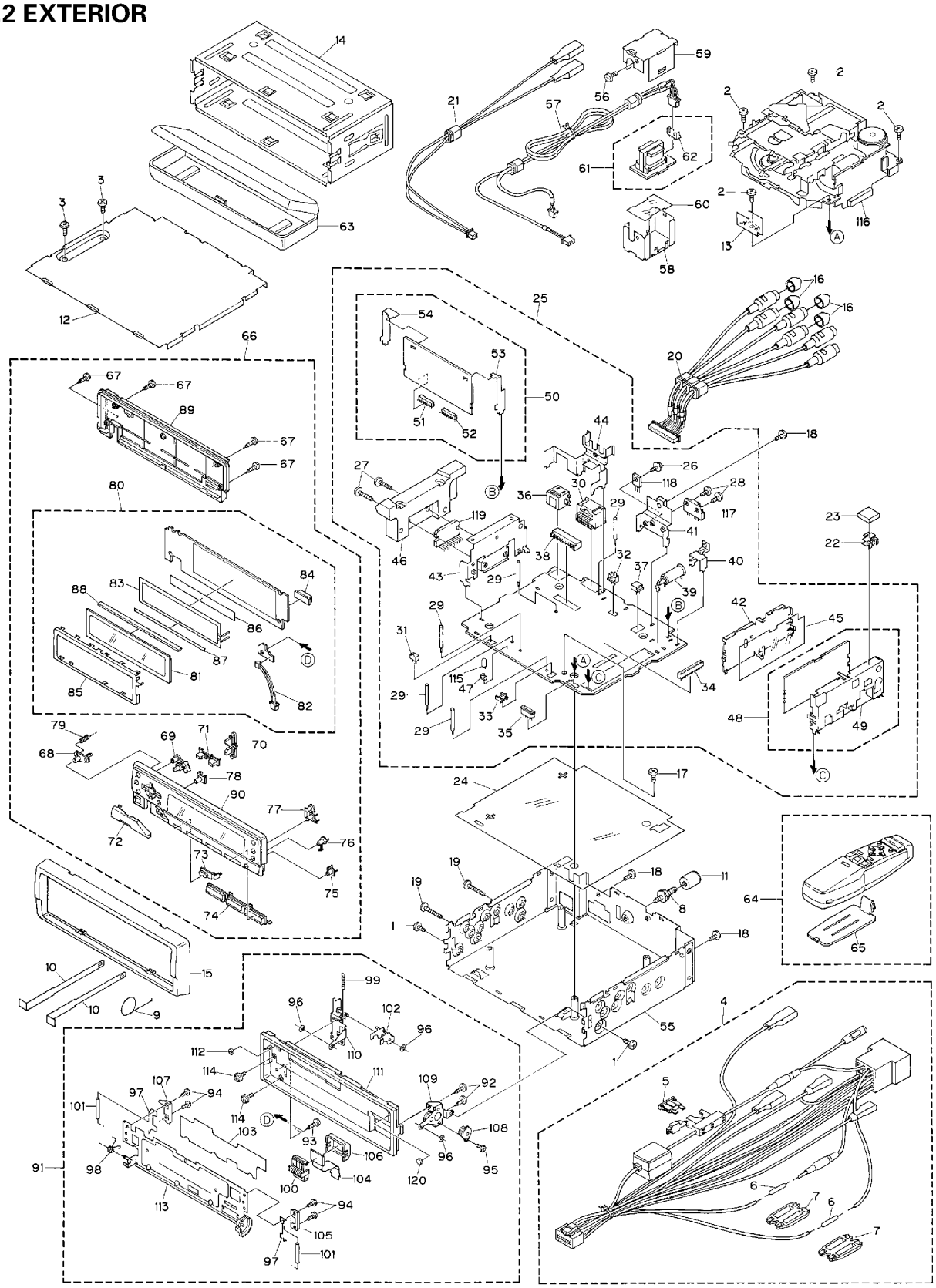


Fig. 2

● EXTERIOR

(1)PARTS LIST

Mark	No.	Description	Part No.
	1	Screw	BMZ30P040FMC
	2	Screw	BSZ26P050FMC
	3	Screw	BSZ30P060FMC
	4	Cord Assy	CDE5399
	5	Fuse(10A)	CEK1136
	6	Resistor	RS1/2PMF102J
	7	Cap	CNS1472
	8	Screw	CBA1284
	9	Spring	CBH-865
	10	Handle	CNC5395
	11	Bush	CNV1009
	12	Case	CNB2193
	13	Shield	CNC6357
	14	Holder	CNC6798
	15	Panel	CNS4320
	16	Cap	CNV2680
	17	Screw	BSZ30P055FUC
	18	Screw	BSZ30P060FMC
	19	Screw	BSZ30P200FMC
	20	Cord	See Contrast table
	21	Cord	CDE5410
	22	Earth Board	CNC6681
	23	Spacer	CNM4913
	24	Insulator	CNM5243
	25	Tuner Amp Unit	See Contrast table
	26	Screw	ASZ26P080FMC
	27	Screw	BSZ26P160FMC
	28	Screw	BSZ30P060FMC
	29	Clamper	CEF1005
	30	Plug(CN601)	CKM1187
	31	Plug(CN674)	CKS-783
	32	Plug(CN671)	CKS1222
	33	Plug(CN672)	CKS1236
	34	Connector(CN751)	CKS1730
	35	Connector(CN673)	CKS2239
	36	Connector(CN301)	CKS3408
	37	Connector(CN602)	CKS3596
	38	Connector(CN201)	CKS3606
	39	Antenna Jack(CN401)	CKX1056
	40	Holder	CNC4569
	41	Holder	CNC5491
	42	Holder	CNC6356
	43	Holder	CNC6361
	44	Holder	CNC6644
	45	Insulator	CNM4684
	46	Heat Sink	CNR1419
	47	Holder	CNV1906
	48	FM/AM Tuner Unit	CWE1416
	49	Holder	CNC6555
	50	Spectrum Analyzer Main Unit	See Contrast table
	51	Plug(CN461)	See Contrast table
	52	Plug(CN151)	See Contrast table
	53	Holder	See Contrast table
	54	Holder	See Contrast table
	55	Chassis Unit	See Contrast table
	56	Screw	BSZ26P050FMC
	57	Cord	MDE9001
	58	Holder	MNC9001
	59	Holder	MNC9002
	60	Insulator	MNM9001
	61	Inverter Unit	MWM9001
	62	Plug(CN101)	CKS1224
	63	Case Assy	CXA7194
	64	Remote Control Assy	See Contrast table
	65	Battery Cover	CNS4406
	66	Detach Grille Assy	See Contrast table
	67	Screw	BPZ20P080FZK
	68	Button(OPEN)	CAC4971
	69	Button(A,F)	CAC4972
	70	Button(▲,▼)	CAC4973
	71	Button(◄,►)	CAC4974
	72	Button(–,+)	CAC4976
	73	Button(SOURCE)	CAC4977
	74	Button(1 — 6)	CAC5379
	75	Button(D)	CAC4979
	76	Button(P)	CAC4980
	77	Button(TA,PT)	CAC4981
	78	Button(BAND)	CAC5222
	79	Spring	CBH1844
	80	Keyboard Unit	See Contrast table
	81	LCD	See Contrast table
	82	Cord	CDE4387
	83	EL(CN1902)	CEL1493
	84	Connector(CN1901)	CKS2733
	85	Holder	CNC6920
	86	Double Side Seal	CNM5301
	87	Spacer	CNM5449
	88	Connector	CNV4817
	89	Cover Unit	CXA9802
	90	Grille Unit	See Contrast table

Mark No.	Description	Part No.
91	Panel Assy	CXB1336
92	Screw	BPZ20P050FMC
93	Screw	BPZ20P060FZK
94	Screw	CBA1082
95	Screw	CBA1176
96	Washer	CBF1001
97	Spring	CBH1528
98	Spring	CBH1660
99	Spring	CBH1696
100	Connector	CKS2780
101	Roller	CLA3247
102	Arm	CNC7130
103	Sheet	CNM5142
104	PCB	CNP4440
105	Holder	CNV2141

Mark No.	Description	Part No.
106	Cover	CNV3965
107	Holder	CNV4979
108	Damper Unit	CXA7159
109	Holder Unit	CXA7793
110	Holder Unit	CXA9806
111	Panel Unit	CXB1226
112	Cushion	CNM5486
113	Holder Unit	CXB1239
114	Screw	IMS20P040FZK
115	Lamp(IL671)	CEL1263
116	Cassette Mechanism Module	See Contrast table
117	IC(IC606)	PA2024A
118	Transistor(Q674)	2SD1189
119	IC(IC251)	TDA7386
120	Cushion	CNM4253

(2) CONTRAST TABLE

KEH-P8600R/EW and KEH-P7600R/EW have the same construction except for the following:

Mark No.	Symbol & Description	Part No.	
		KEH-P8600R/EW	KEH-P7600R/EW
20	Cord	CDE5222	CDE5219
25	Tuner Amp Unit	CWM5336	CWM5337
50	Spectrum Analyzer Main Unit	CWM5339	Not used
51	Plug(CN461)	CKS1615	Not used
52	Plug(CN151)	CKS1616	Not used
53	Holder	CNC6676	Not used
54	Holder	CNC6788	Not used
55	Chassis Unit	CXB1229	CXB1527
64	Remote Control Assy	CXB1156	CXB1157
66	Detach Grille Assy	CXB1329	CXB1334
80	Keyboard Unit	CWM5062	CWM5416
81	LCD	CAW1403	CAW1404
90	Grille Unit	CXB1533	CXB1538
116	Cassette Mechanism Module	EXK3335	EXK3315

2.3 CASSETTE MECHANISM MODULE

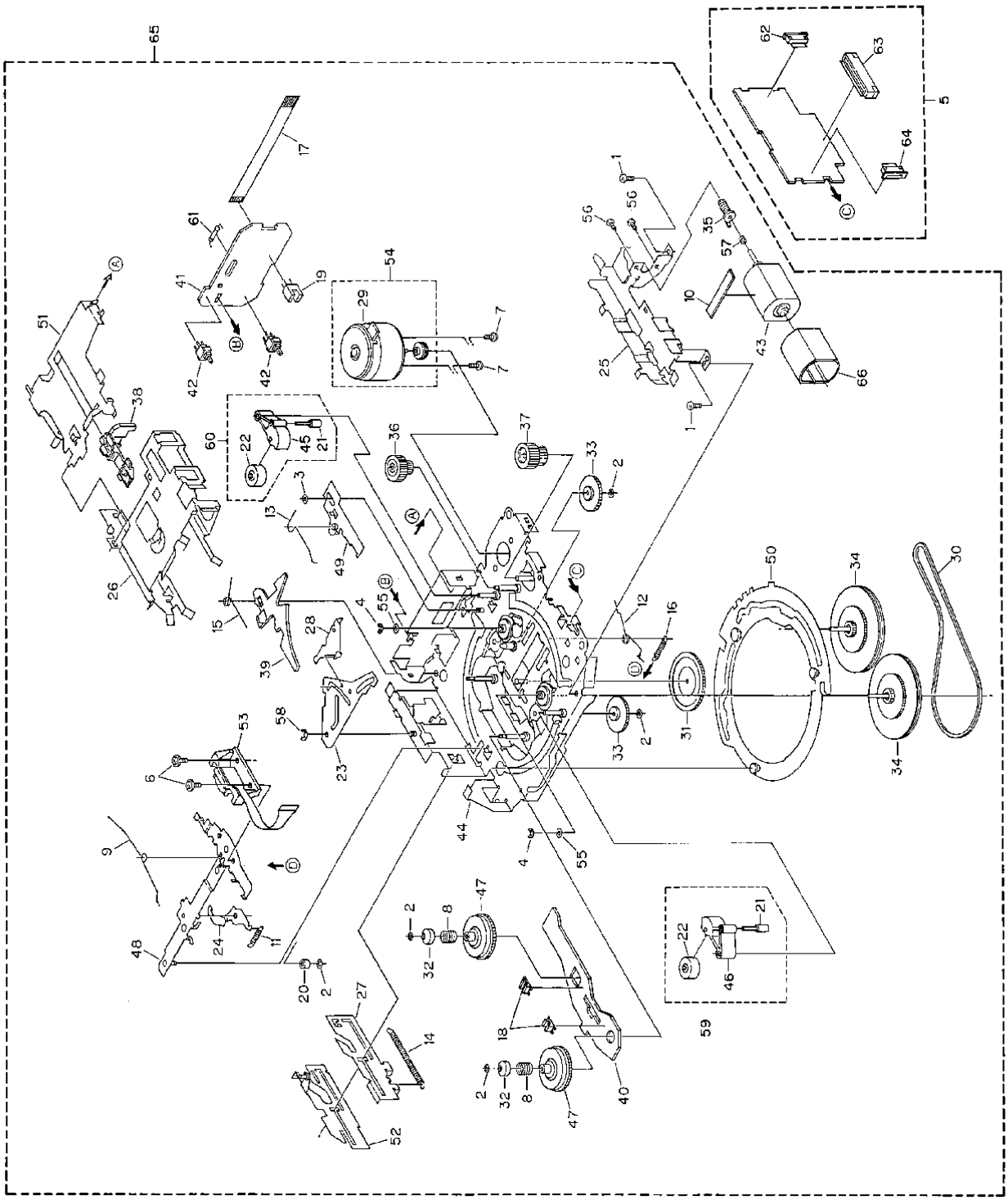


Fig. 3

● CASSETTE MECHANISM MODULE

(1)PARTS LIST

Mark No.	Description	Part No.
1	Screw	BSZ20P040FMC
2	Washer	CBF1037
3	Washer	CBF1038
4	Washer	CBG1003
5	Deck Unit	See Contrast table
6	Screw	EBA1028
7	Screw	EBA1037
8	Spring	EBH1531
9	Spring	EBH1575
10	Cushion	EWM1034
11	Spring	EBH1515
12	Spring	EBH1587
13	Spring	EBH1517
14	Spring	EBH1518
15	Spring	EBH1519
16	Spring	EBH1537
17	Cord	EDD1015
18	Photo-interrupter(EGN2,3)	EGN1006
19	Photo-interrupter(EGN1)	EGN1005
20	Roller	ENR1031
21	Shaft	ELA1373
22	Pinch Roller	ENV1518
23	Arm	ENC1396
24	Arm	ENC1397
25	Guide	ENC1398
26	Holder	ENC1417
27	Lever	ENC1448
28	Arm	ENC1401
29	Motor	EXM1027
30	Belt	ENT1027
31	Gear	ENV1347
32	Collar	ENV1508
33	Gear	ENV1350
34	Flywheel	ENV1410
35	Worm Gear	ENV1439
36	Worm Wheel	ENV1440
37	Gear	ENR1028
38	Lever	ENV1442
39	Arm	ENV1445
40	Gathering P.C.Board	ENX1037
41	Gathering P.C.Board	ENX1038
42	Switch(S1,S2)	ESG1004
43	Motor Unit(M2)	EXA1485
44	Chassis Unit	EXA1511
45	Pinch Holder	ENV1485
46	Pinch Holder	ENV1486
47	Reel Unit	EXA1456
48	Head Base Unit	EXA1457
49	Lever Unit	EXA1438
50	Gear Unit	EXA1436
51	Frame Unit	EXA1458
52	Lever Unit	EXA1439
53	Head Assy(HD1)	EXA1452
54	Motor Unit(M1)	EXA1454
55	Washer	HBF-179
56	Screw	BMZ20P022FMC
57	Spring	EBH1545
58	Washer	YE20FUC
59	Pinch Holder Unit	EXA1529
60	Pinch Holder Unit	EXA1528
61	Resistor(R1)	RD1/4HM181J
62	Connector(CN253)	CKS2129
63	Connector(CN251)	CKS1711
64	Connector(CN252)	CKS2127
65	Spare Unit	See Contrast table
66	Shield	See Contrast table

(2) CONTRAST TABLE

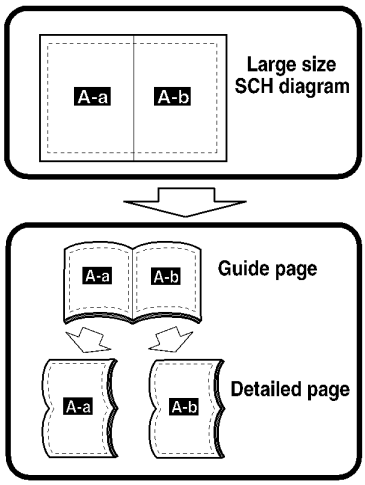
KEH-P8600R/EW and KEH-P7600R/EW have the same construction except for the following:

Mark No.	Symbol & Description	Part No.	
		KEH-P8600R/EW	KEH-P7600R/EW
5	Deck Unit	CWM1008	CWM1007
65	Spare Unit	CXA3029	CXA3028
66	Shield	ENC1410	Not used

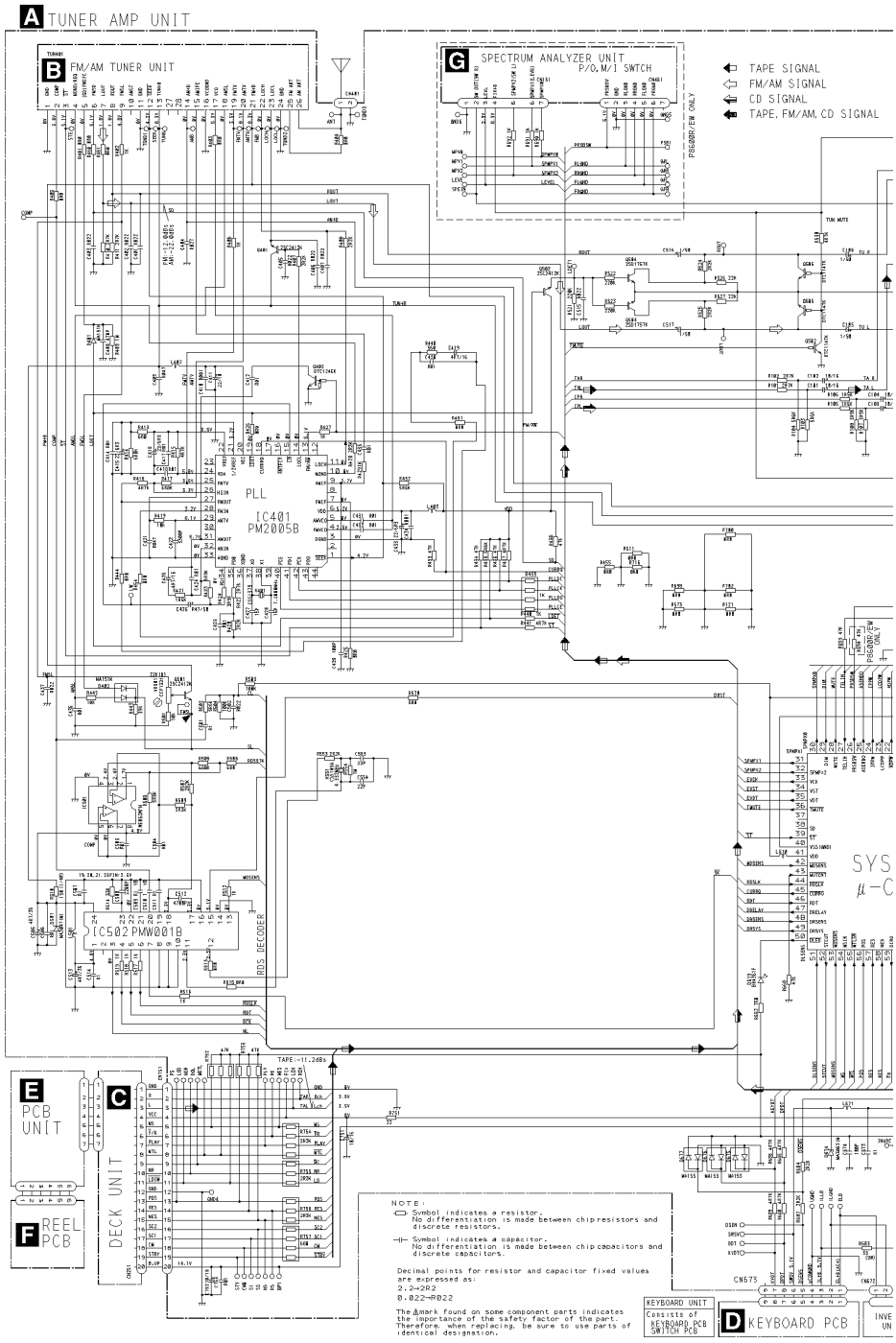
3. SCHEMATIC DIAGRAM

3.1 OVERALL CONNECTION DIAGRAM (GUIDE PAGE)

Note: When ordering service parts, be sure to refer to "EXPLODED VIEWS AND PARTS LIST" or "ELECTRICAL PARTS LIST".



A-a


A TUNER AMP UNIT
B FM/AM TUNER UNIT
G SPECTRUM ANALYZER UNIT
P/O M/I SWTCH
TAPE SIGNAL
FM/AM SIGNAL
CD SIGNAL
TAPE, FM/AM, CD SIGNAL
PLL
IC401
PM2005B
IC502 PMW001B
RDS DECODER
E PCB UNIT
C
F REEL PCB
DECK UNIT
D KEYBOARD PCB
KEYBOARD UNIT
Consists of KEYBOARD PCB SWITCH PCB
CN673
NOTE:
Symbol indicates a resistor. No differentiation is made between chip resistors and discrete resistors.
Symbol indicates a capacitor. No differentiation is made between chip capacitors and discrete capacitors.
Decimal points for resistor and capacitor fixed values are expressed as:
2.2→2R2
0.022→R022
The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.

A-b

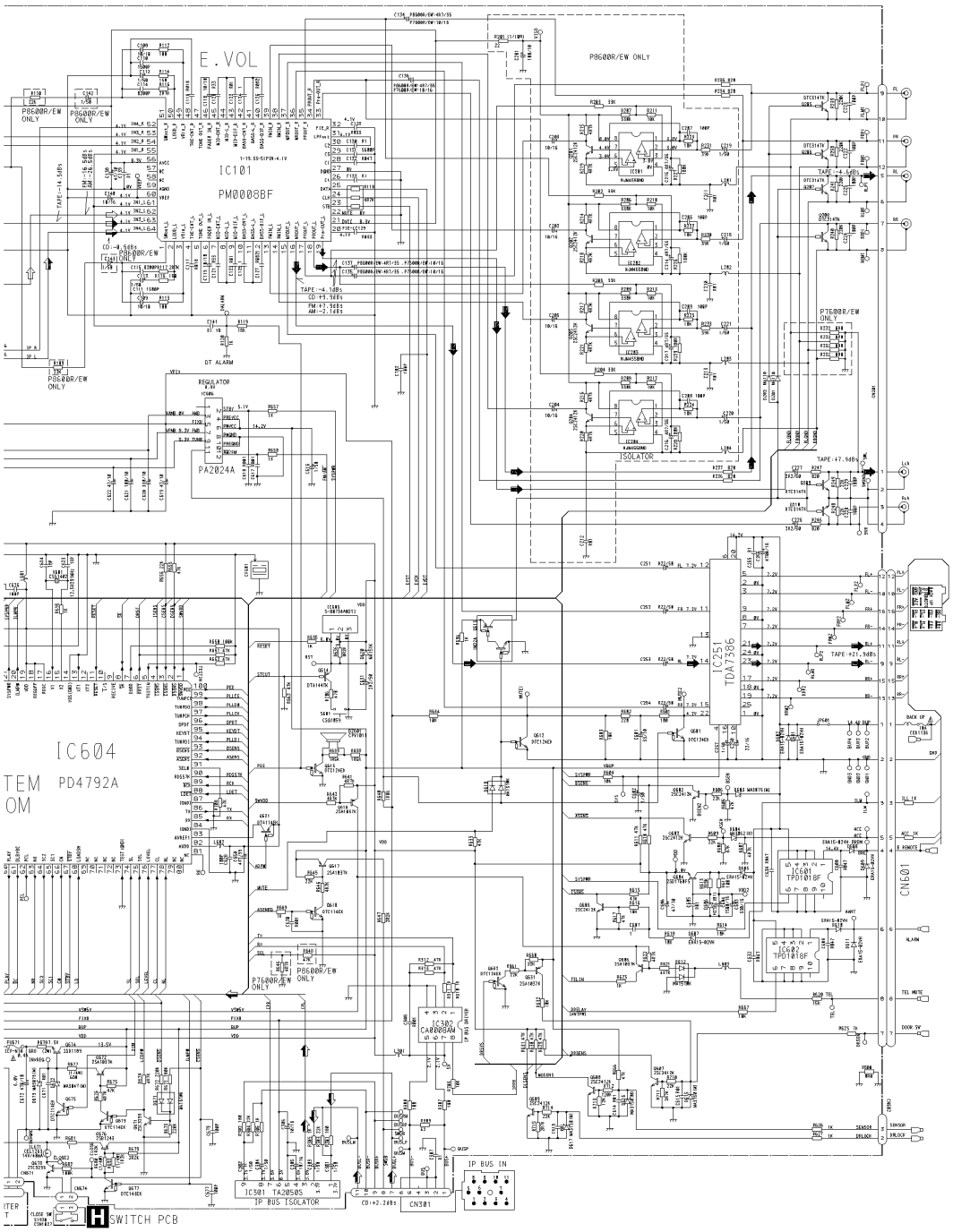
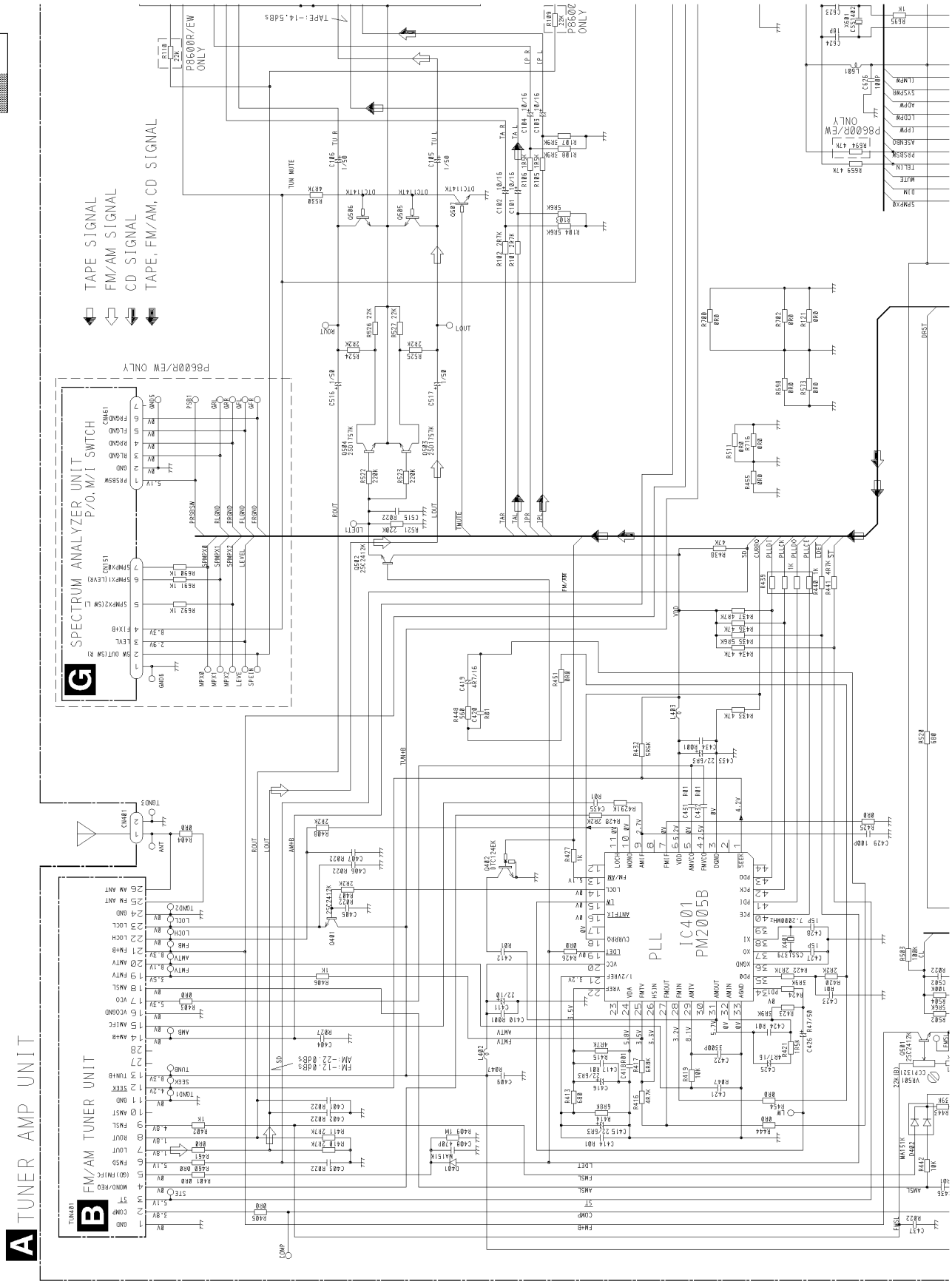

E.VOL
IC101
PM0008BF
P8600R/EW ONLY
P7600R/EW ONLY
REGULATOR
PA2024A
ISOLATOR
IC604
TEM
OM
PD4792A
IC251
TDA7386
IC601
TP0101BF
IC602
TP0101BF
IC302
CAP0002AN
IC301 TA2005BS
IP BUS ISOLATOR
IP BUS IN
CN301
CN601
H SWITCH PCB

Fig. 4

A-a A-b


A TUNER AMP UNIT
B FM/AM TUNER UNIT
G SPECTRUM ANALYZER UNIT P/O M/I SWTCH
TAPE SIGNAL
FM/AM SIGNAL
CD SIGNAL
TAPE, FM/AM, CD SIGNAL
P8600R/EW ONLY
P8600R/EW ONLY
P8600R/EW ONLY
IC401 PM2005B PLL

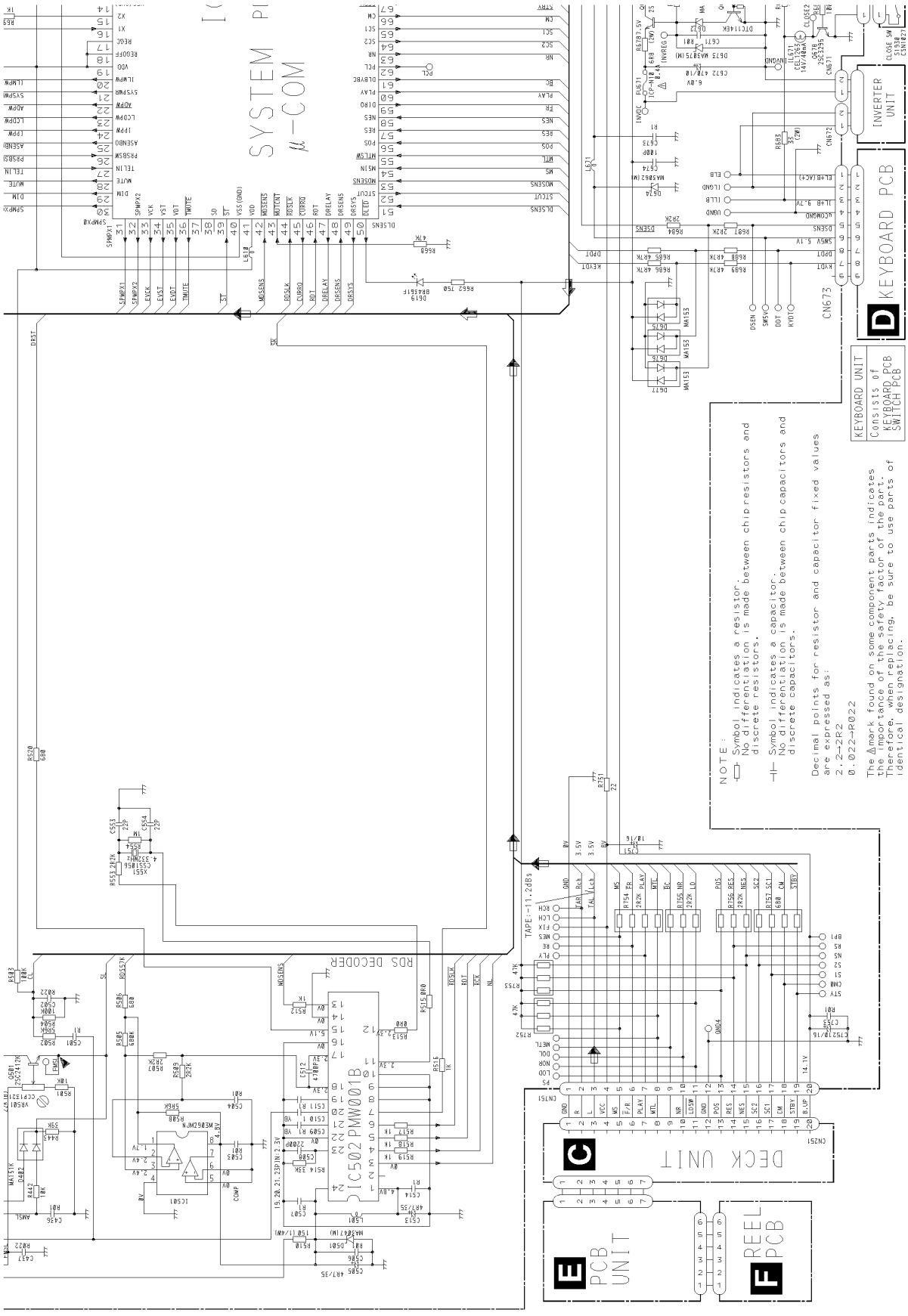
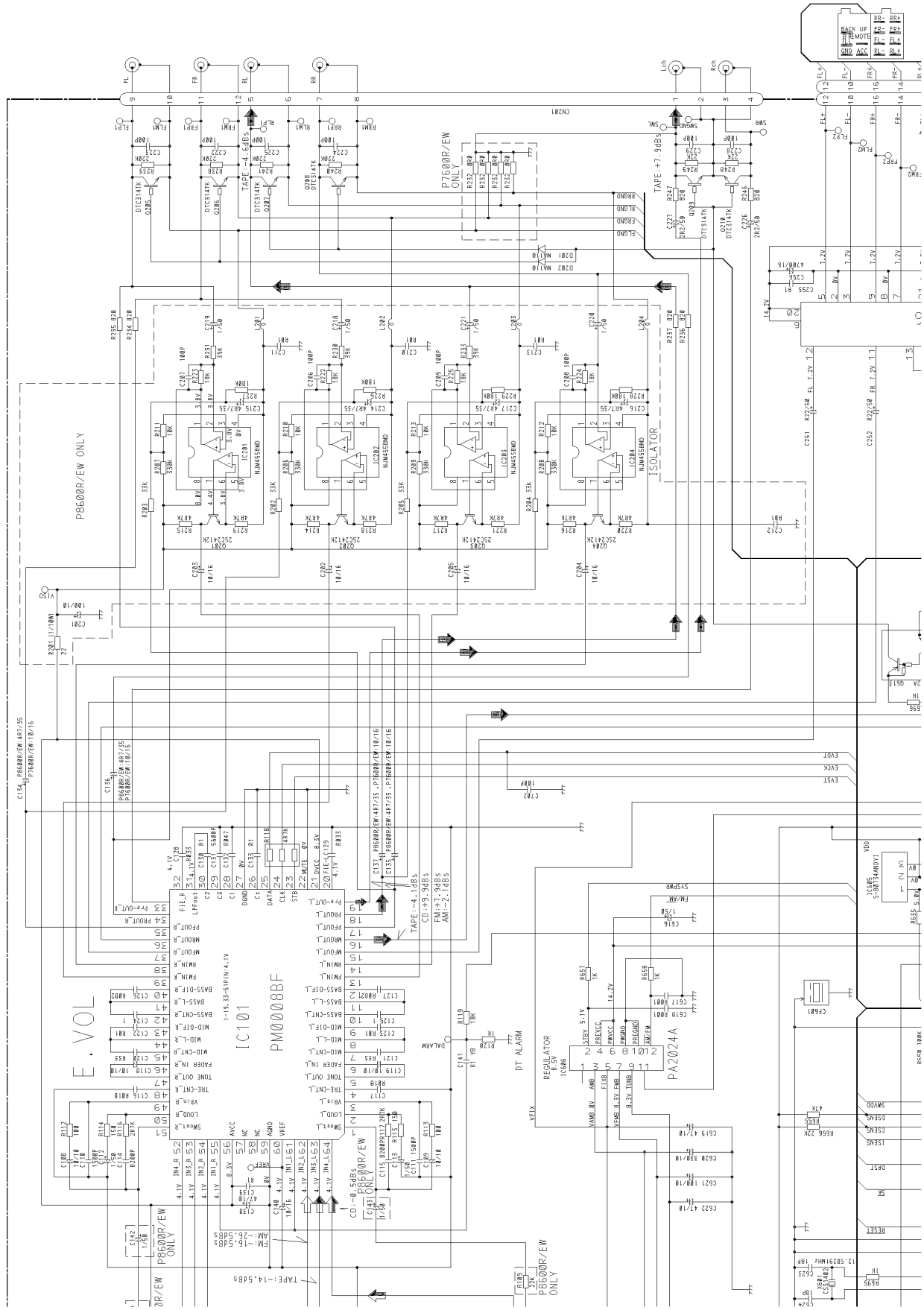

SYSTEM PI
μ-COM
INVERTER UNIT
KEYBOARD PCB
CN673
KEYBOARD UNIT
Consists of
KEYBOARD PCB
SWITCH PCB
NOTE :
Symbol indicates a resistor.
No differentiation is made between chip resistors and discrete resistors.
Symbol indicates a capacitor.
No differentiation is made between chip capacitors and discrete capacitors.
Decimal points for resistor and capacitor fixed values are expressed as:
2.2→2R2
0.022→P022
The Δmark found on some component parts indicates the importance of the safety factor of the part.
Therefore, when replacing, be sure to use parts of identical designation.
RDS DECODER
TAPE-11.2dBs
DECK UNIT
PCB UNIT
REEL PCB

Fig. 5

A-a A-b



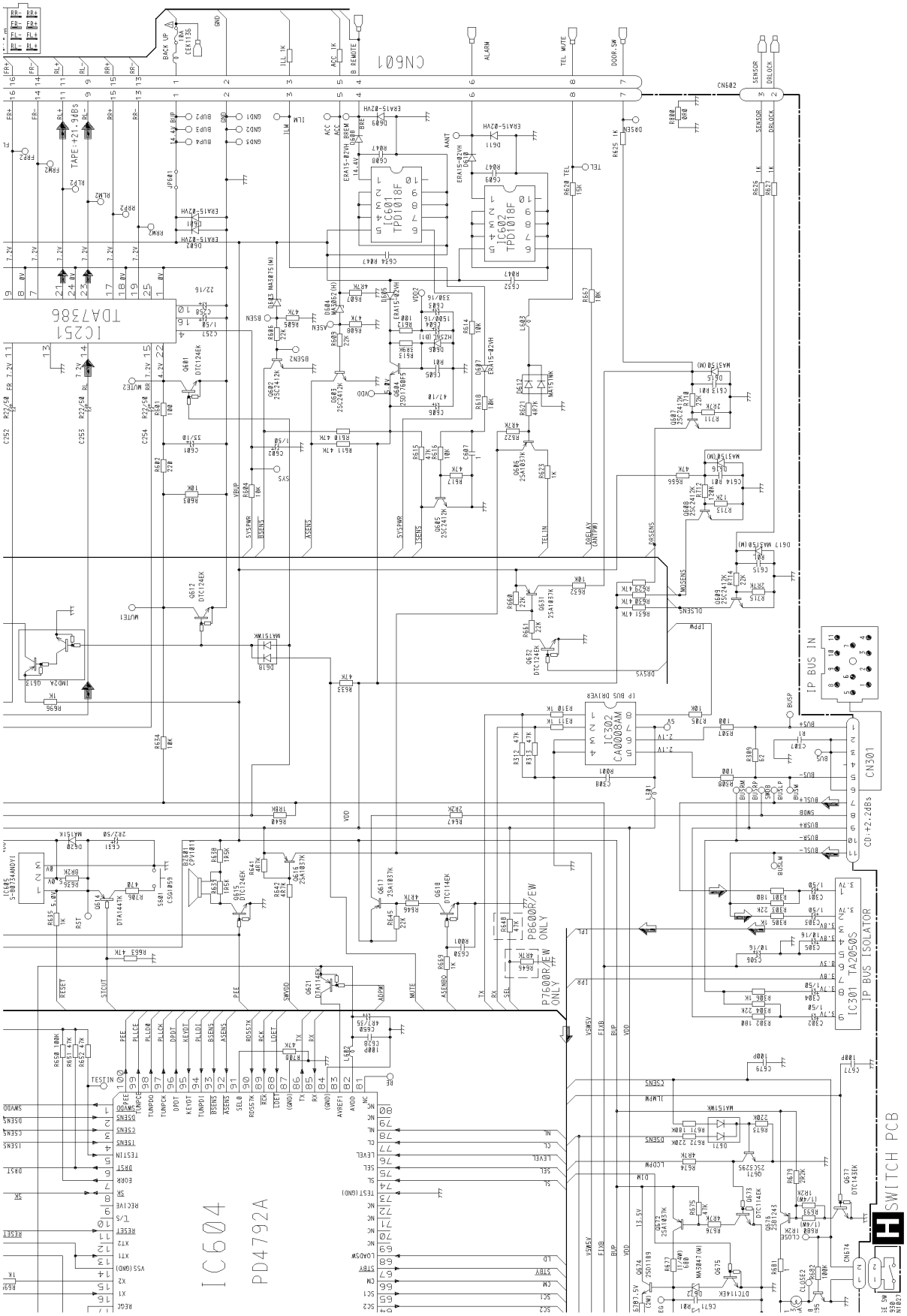
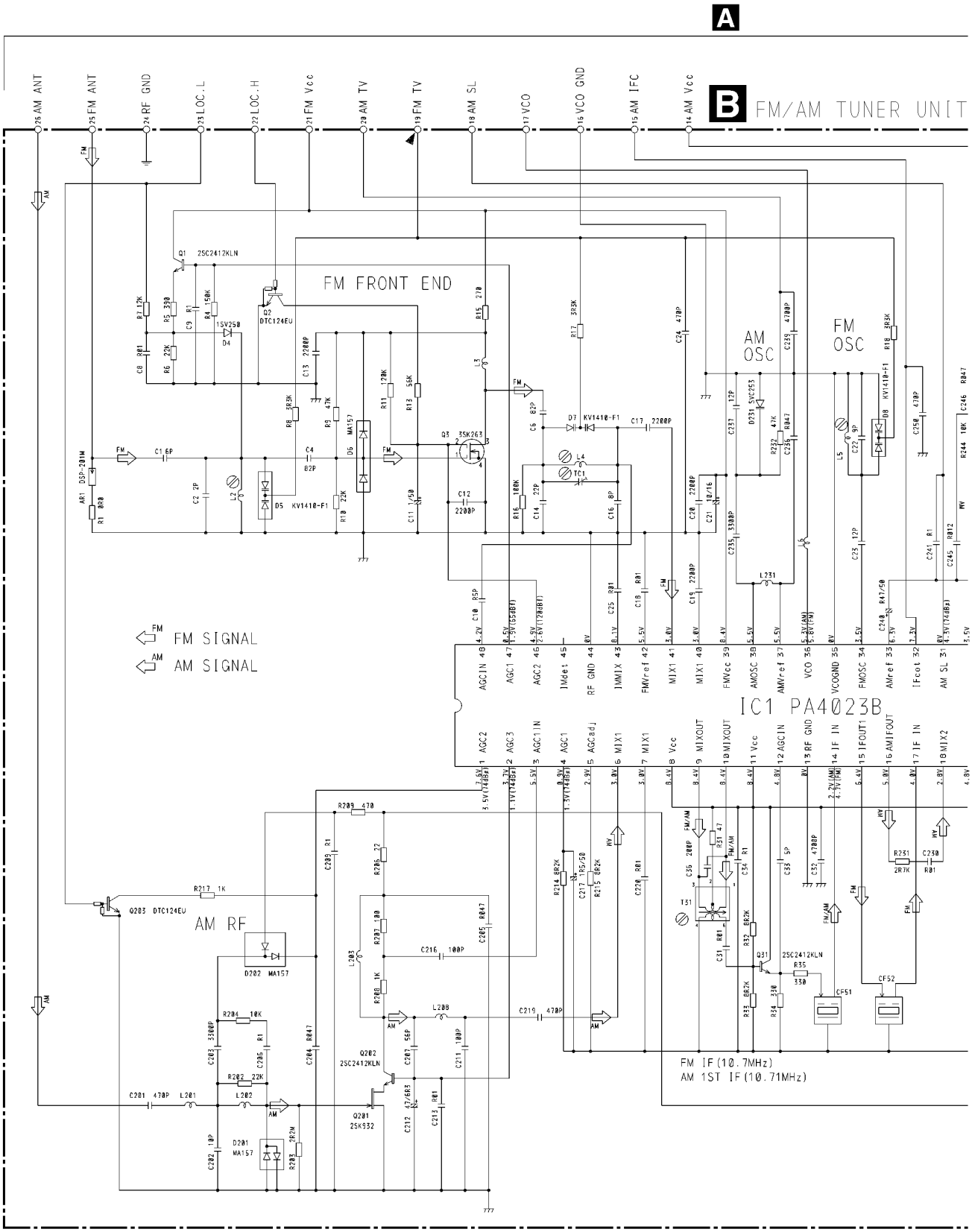

A-b
A-a
CN601
CN602
IC6601
TPD1018F
IC6602
TPD1018F
IC251
TDA7386
IC604
PD4792A
IC302
CA0003AM
IP BUS DRIVER
IP BUS IN
CN301
IC301
TA20505
IP BUS ISOLATOR
P7600R/EW ONLY
SWITCH PCB
TAPE:+21.9dBs
CD:+2.2dBs
BACK UP
B REMOTE
ACC
ALARM
TEL MUTE
DOOR SW
SENSOR
DLOCK

Fig. 6

3.2 FM/AM TUNER UNIT



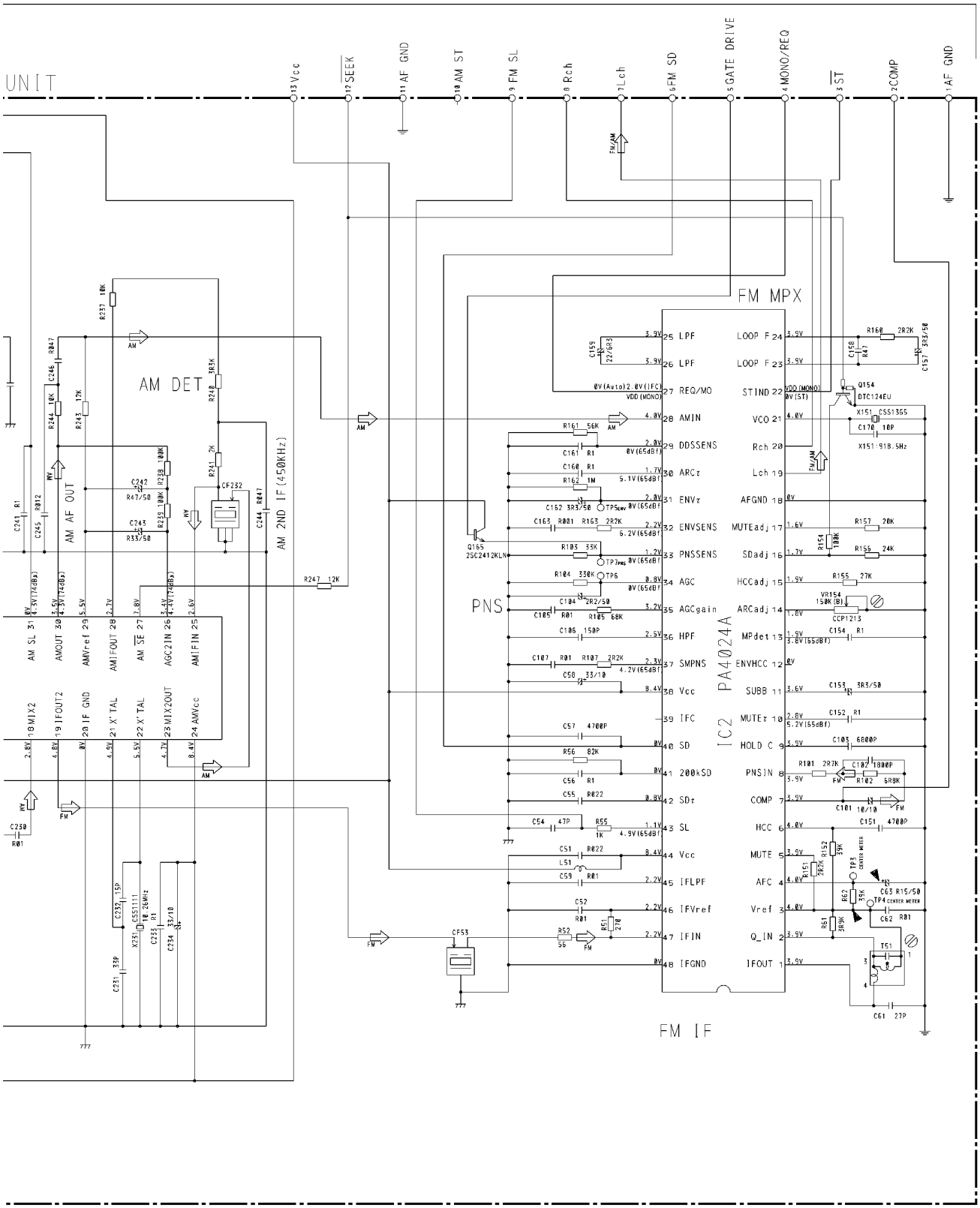
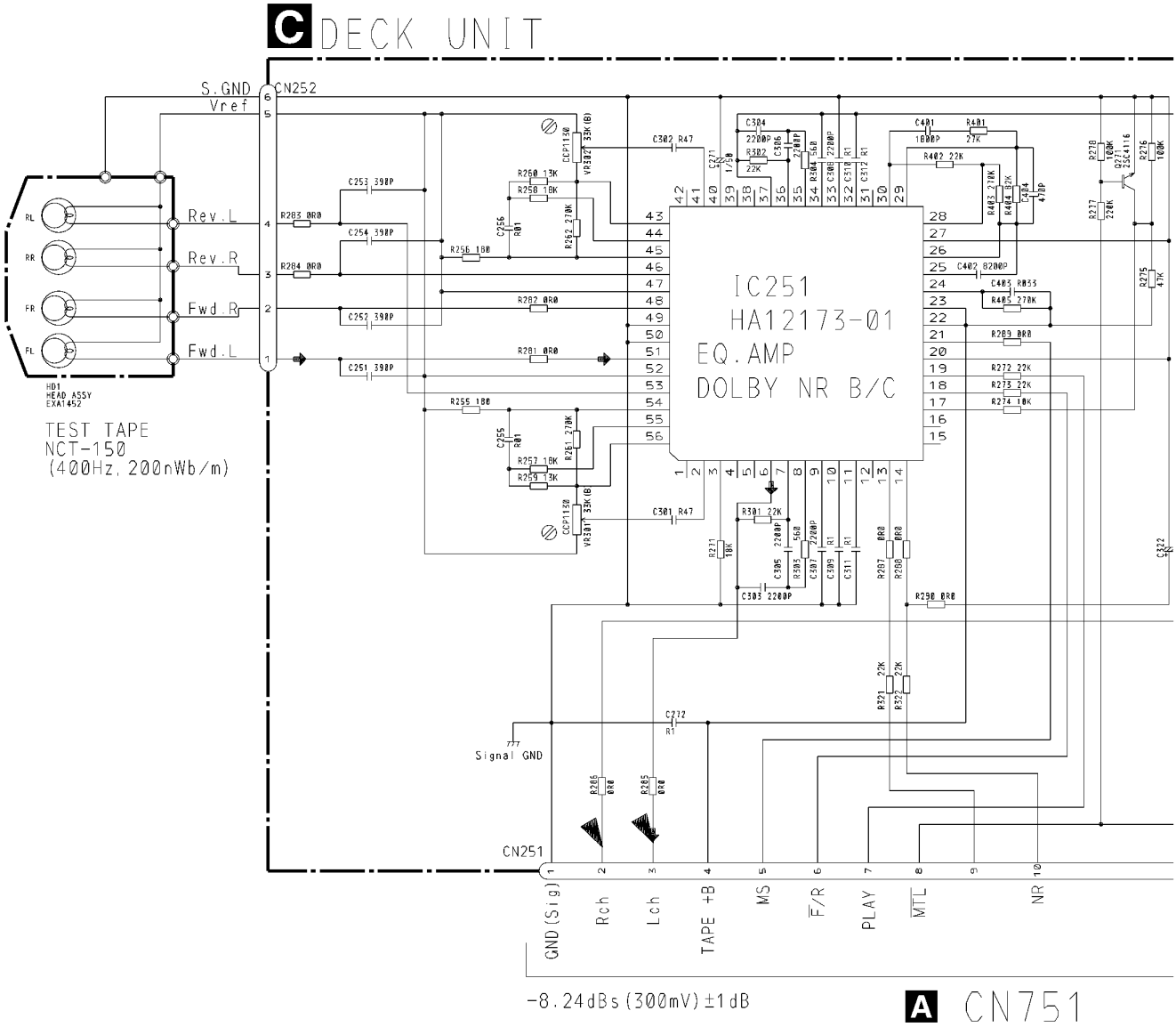

UNIT
13 Vcc
12 SEEK
11 AF GND
10 AM ST
9 FM SL
8 Rch
7 Lch
6 FM SD
5 GATE DRIVE
4 MONO/REQ
3 ST
2 COMP
1 AF GND
FM MPX
AM DET
AM AF OUT
AM 2ND IF (450KHz)
PNS
IC2 PA4024A
FM IF
25 LPF
26 LPF
27 REQ/MO
28 AMIN
29 DDSSENS
30 ARCr
31 ENVr
32 ENVSENS
33 PNSSENS
34 AGC
35 AGCgain
36 HPF
37 SMPNS
38 Vcc
39 IFC
40 SD
41 200kSD
42 SDr
43 SL
44 Vcc
45 IFLPF
46 IFVref
47 IFIN
48 IFGND
24 LOOP F
23 LOOP F
22 STIND
21 VCO
20 Rch
19 Lch
18 AFGND
17 MUTEadj
16 SDadj
15 HCCadj
14 ARCadj
13 MPdet
12 ENVHCC
11 SUBB
10 MUTEr
9 HOLD C
8 PNSIN
7 COMP
6 HCC
5 MUTE
4 AFC
3 Vref
2 Q_IN
1 IFOUT
31 AM SL
30 AMOUT
29 AMVref
28 AMIFOUT
27 AM SE
26 AGC2IN
25 AMIFIN
18 MIX2
19 IFOUT2
20 IF GND
21 XTAL
22 XTAL
23 MIX2OUT
24 AMVcc
Q165 2SC2412KLN
Q154 DTC124EU
CF232
CF53
X151 CSS1365 X151:918.5Hz
X251 CSS1111 10.25MHz
TP5 TP6 TP7 TP8 TP4 CENTER METER
VR154 150K(B) CCP1213
T51
FM/AM
AM
FM

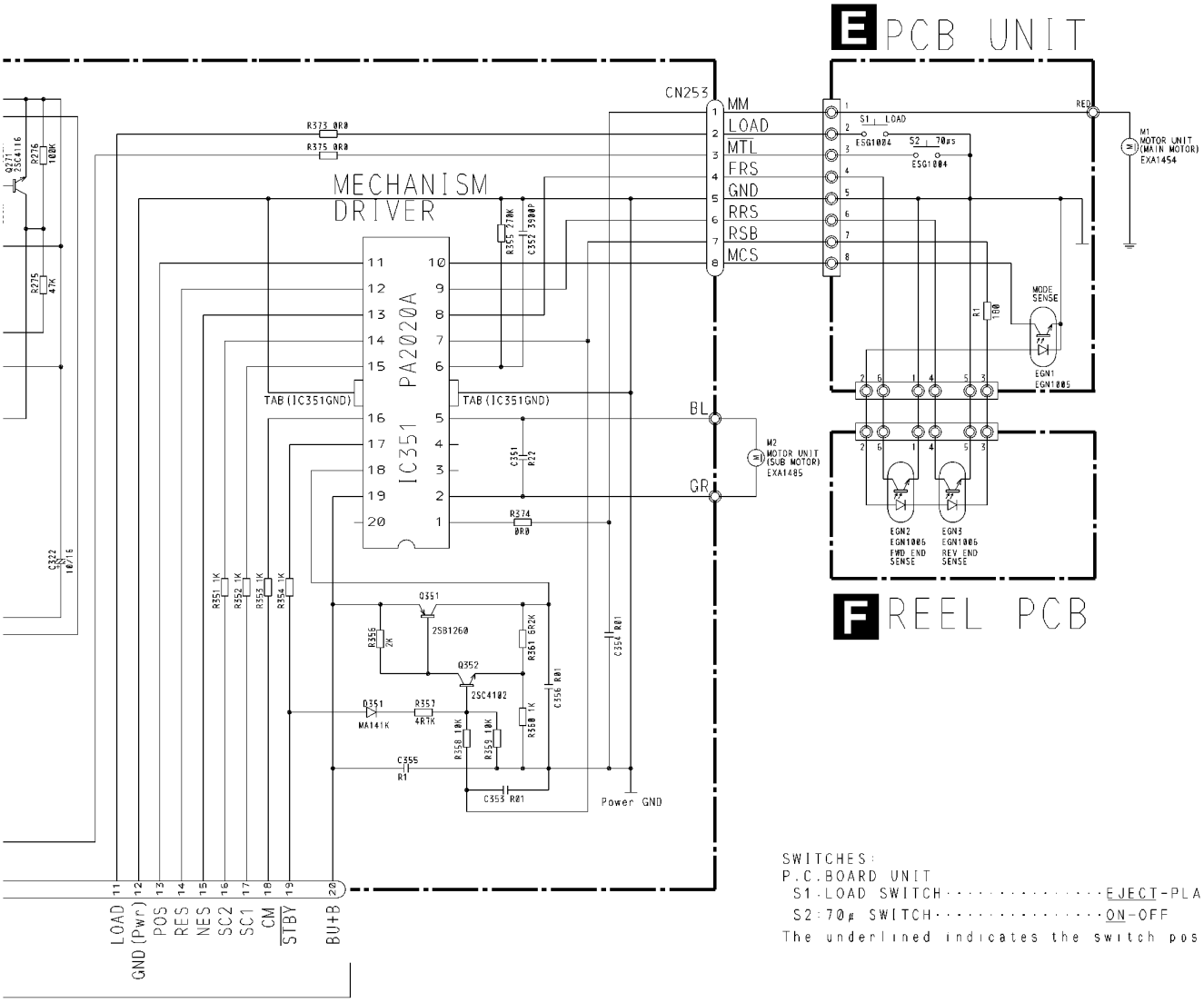
Fig. 7

B

3.3 CASSETTE MECHANISM MODULE

● **KEH-P8600R/EW**

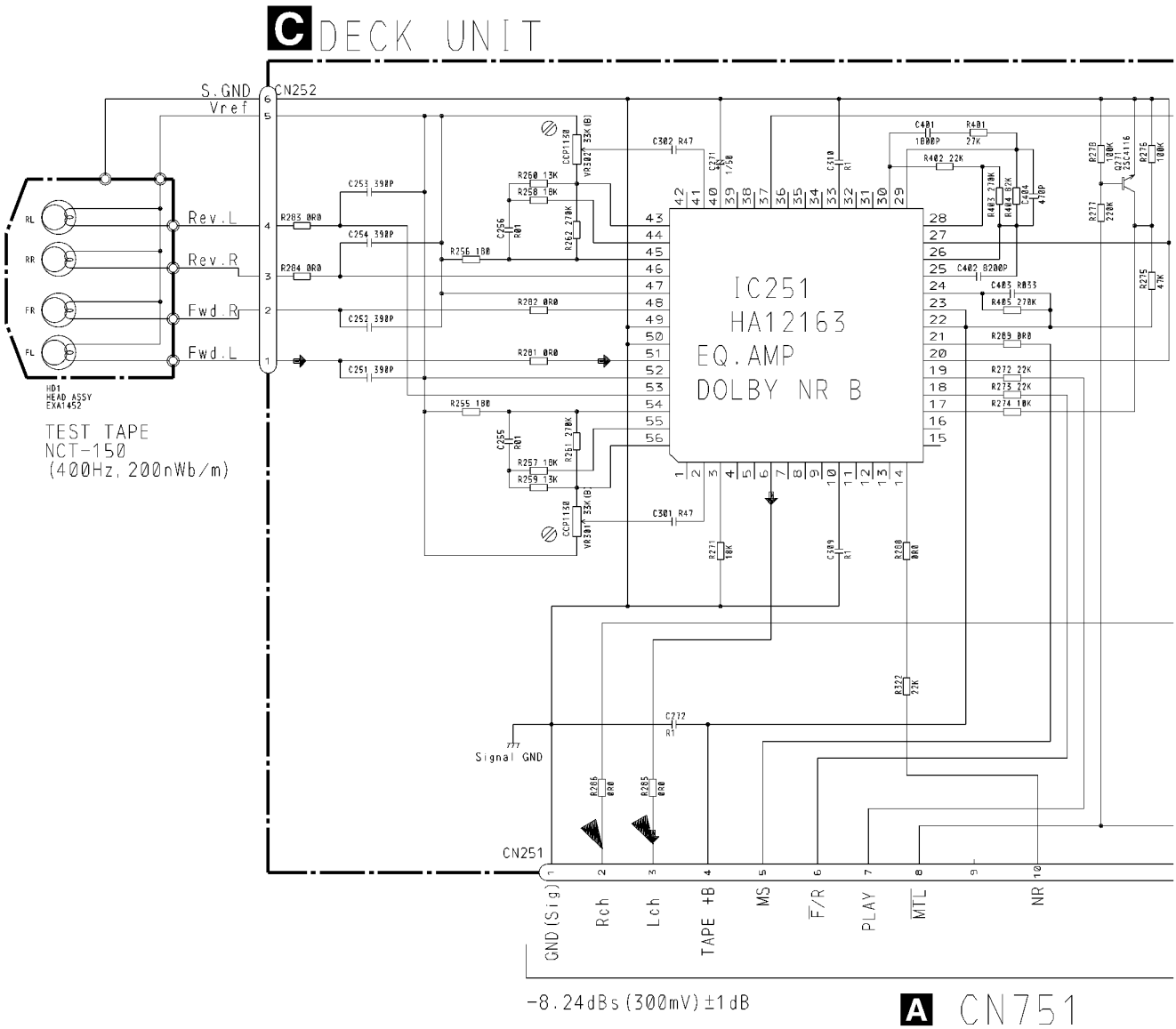


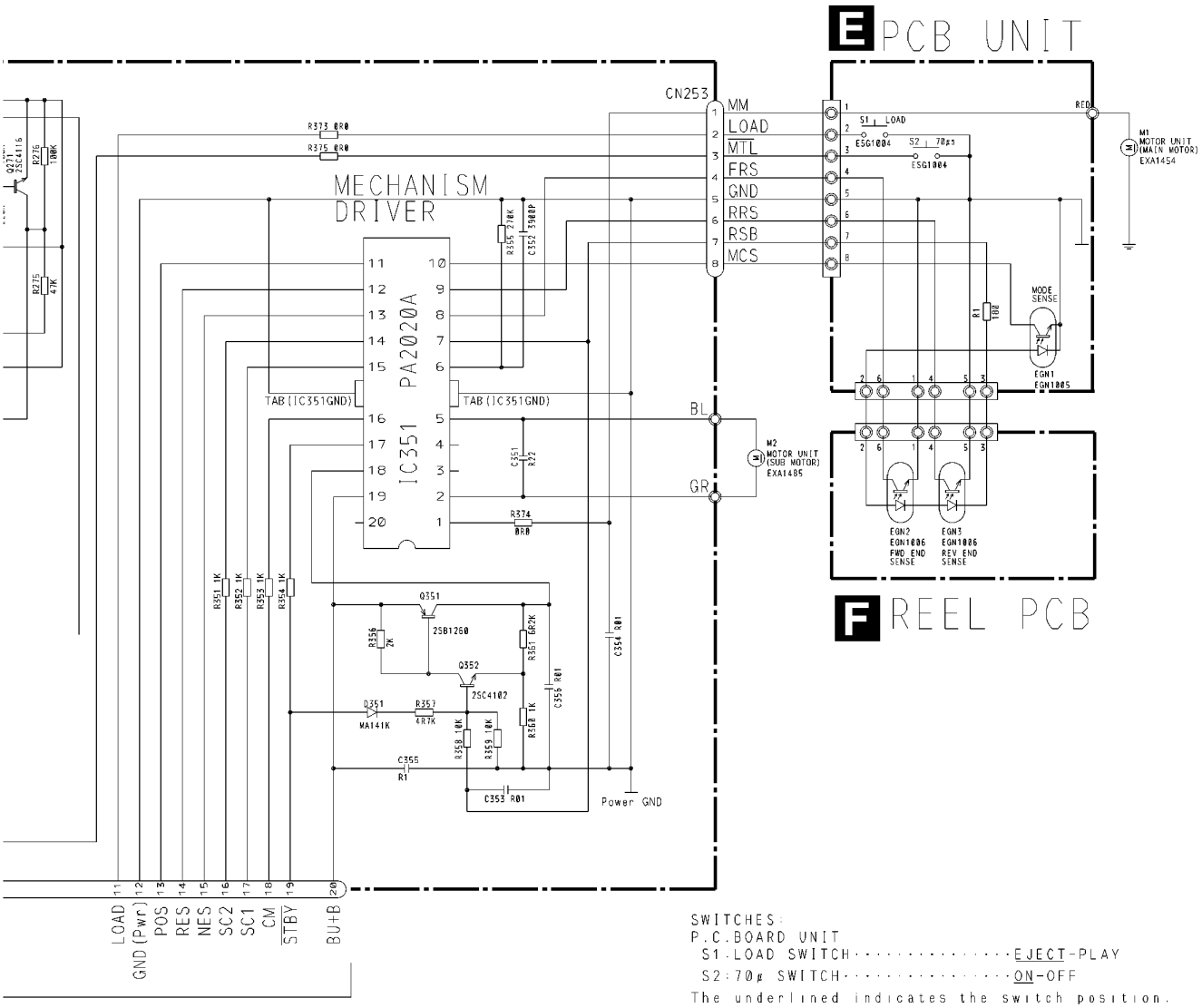


SWITCHES:
P.C.BOARD UNIT
S1:LOAD SWITCH·····EJECT-PLAY
S2:70μ SWITCH·····ON-OFF
The underlined indicates the switch position.

Fig. 8

● KEH-P7600R/EW



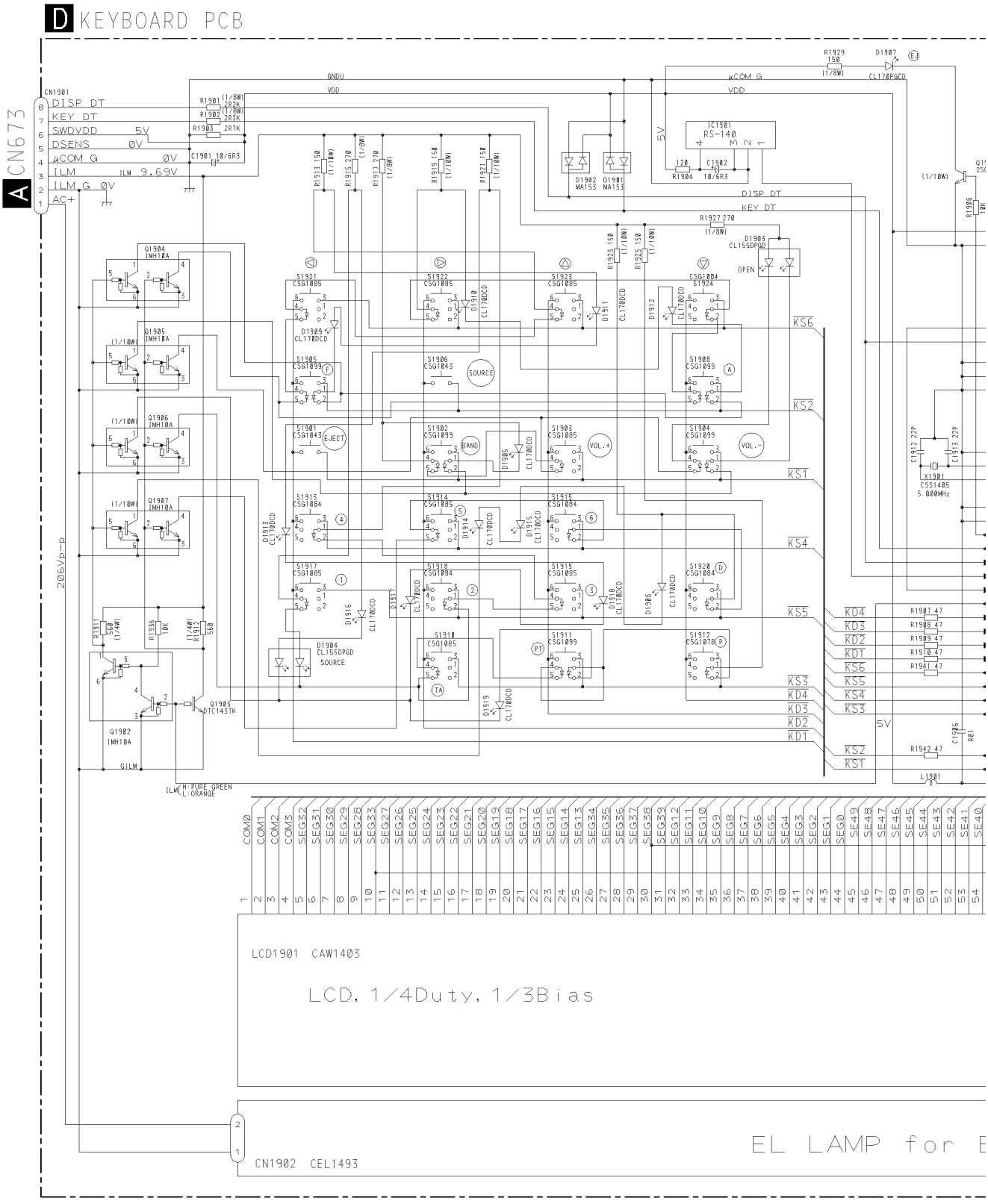


SWITCHES:
P.C.BOARD UNIT
S1.LOAD SWITCH ..... EJECT-PLAY
S2:70μ SWITCH ..... ON-OFF
The underlined indicates the switch position.

Fig. 9

3.4 KEYBOARD PCB

● **KEH-P8600R/EW**



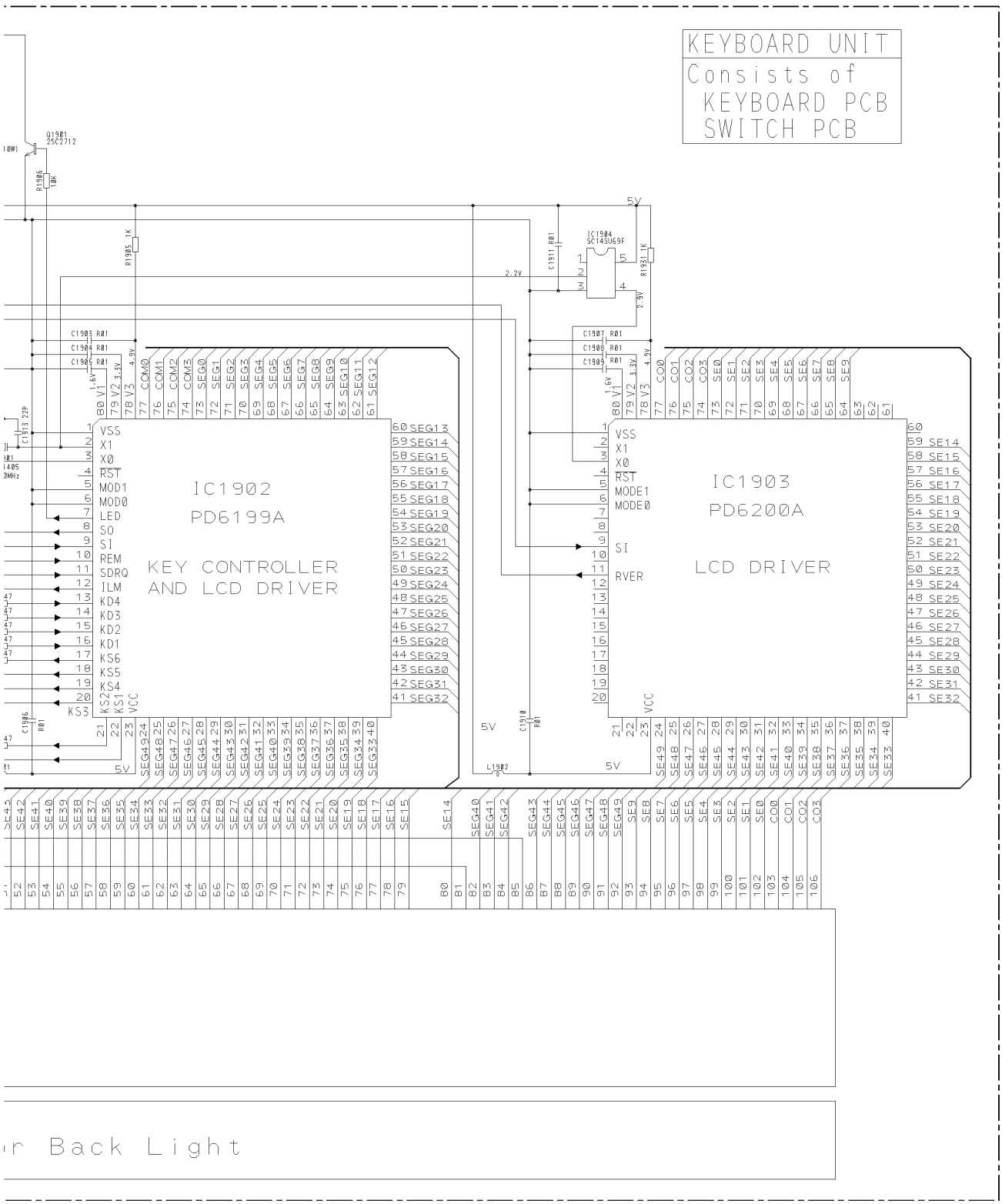
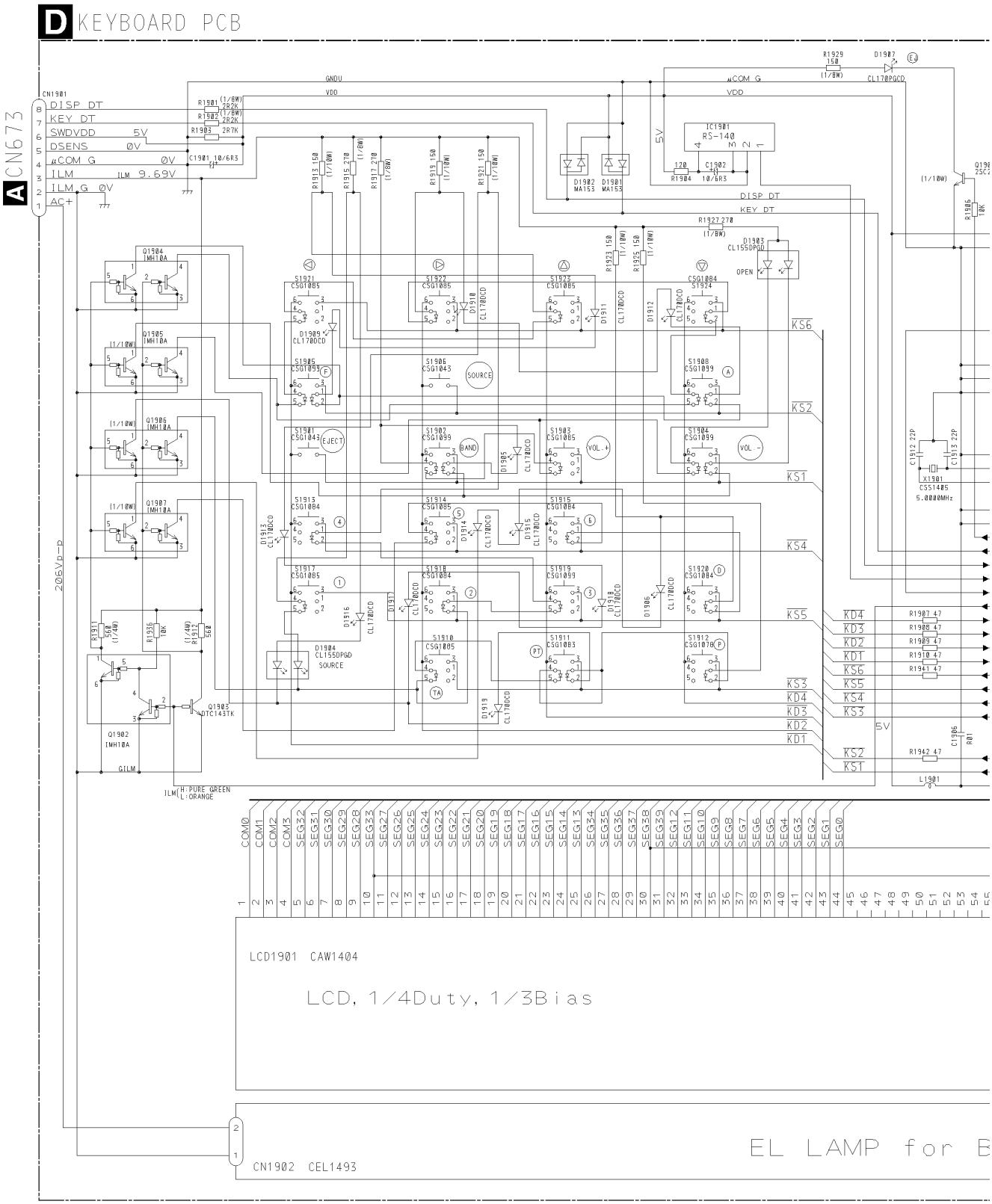

KEYBOARD UNIT
Consists of
KEYBOARD PCB
SWITCH PCB
IC1902
PD6199A
KEY CONTROLLER
AND LCD DRIVER
IC1903
PD6200A
LCD DRIVER
r Back Light

Fig. 10

● **KEH-P7600R/EW**



MC-Service

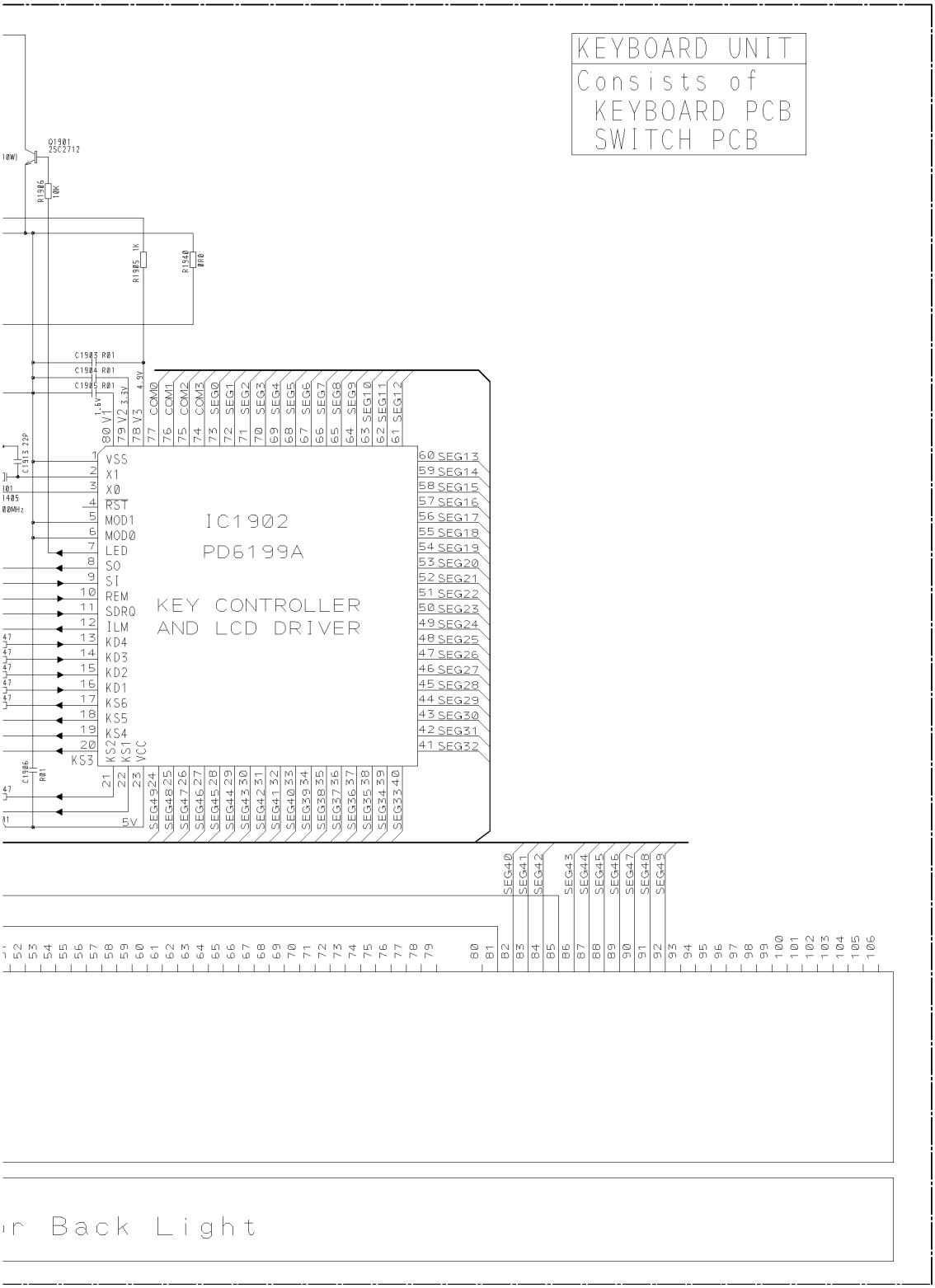
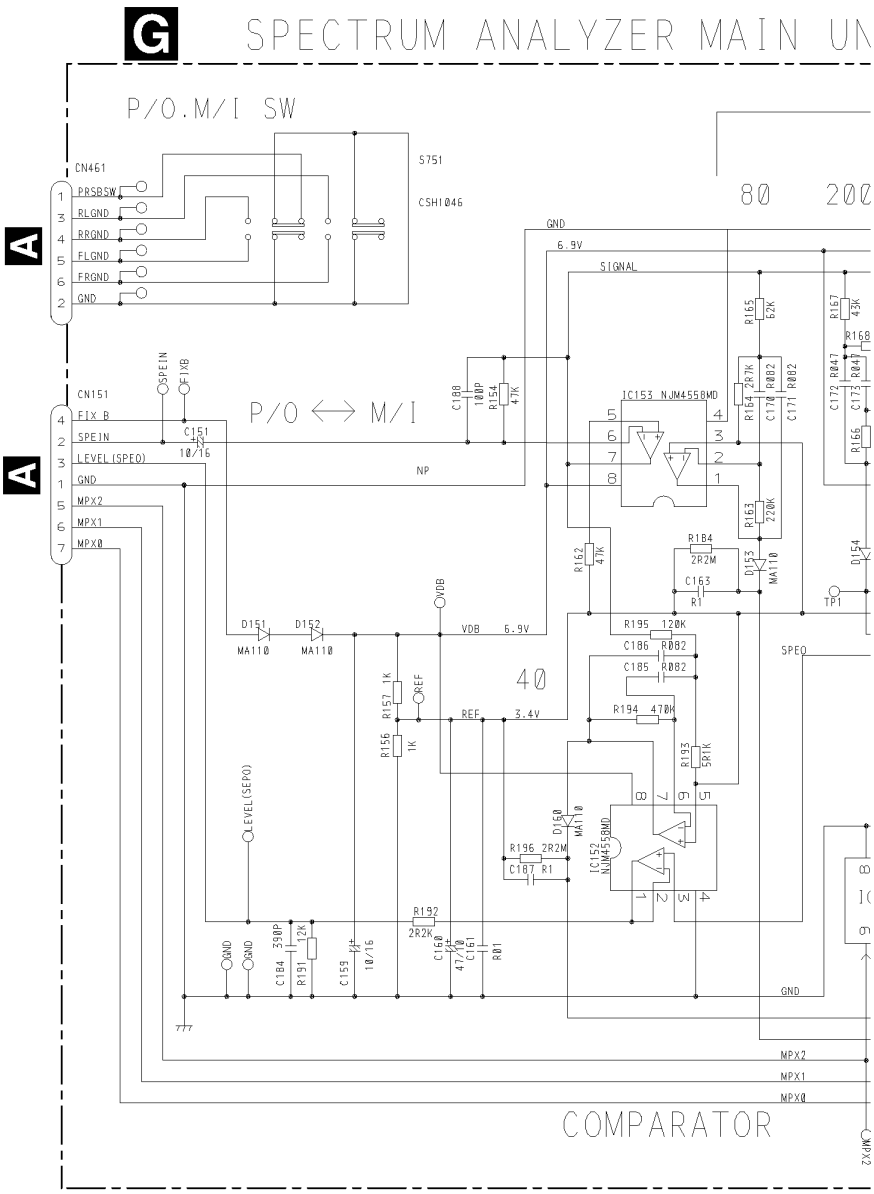

KEYBOARD UNIT
Consists of
KEYBOARD PCB
SWITCH PCB
IC1902
PD6199A
KEY CONTROLLER
AND LCD DRIVER
Back Light

Fig. 11

3.5 SPECTRUM ANALYZER MAIN UNIT

● KEH-P8600R/EW



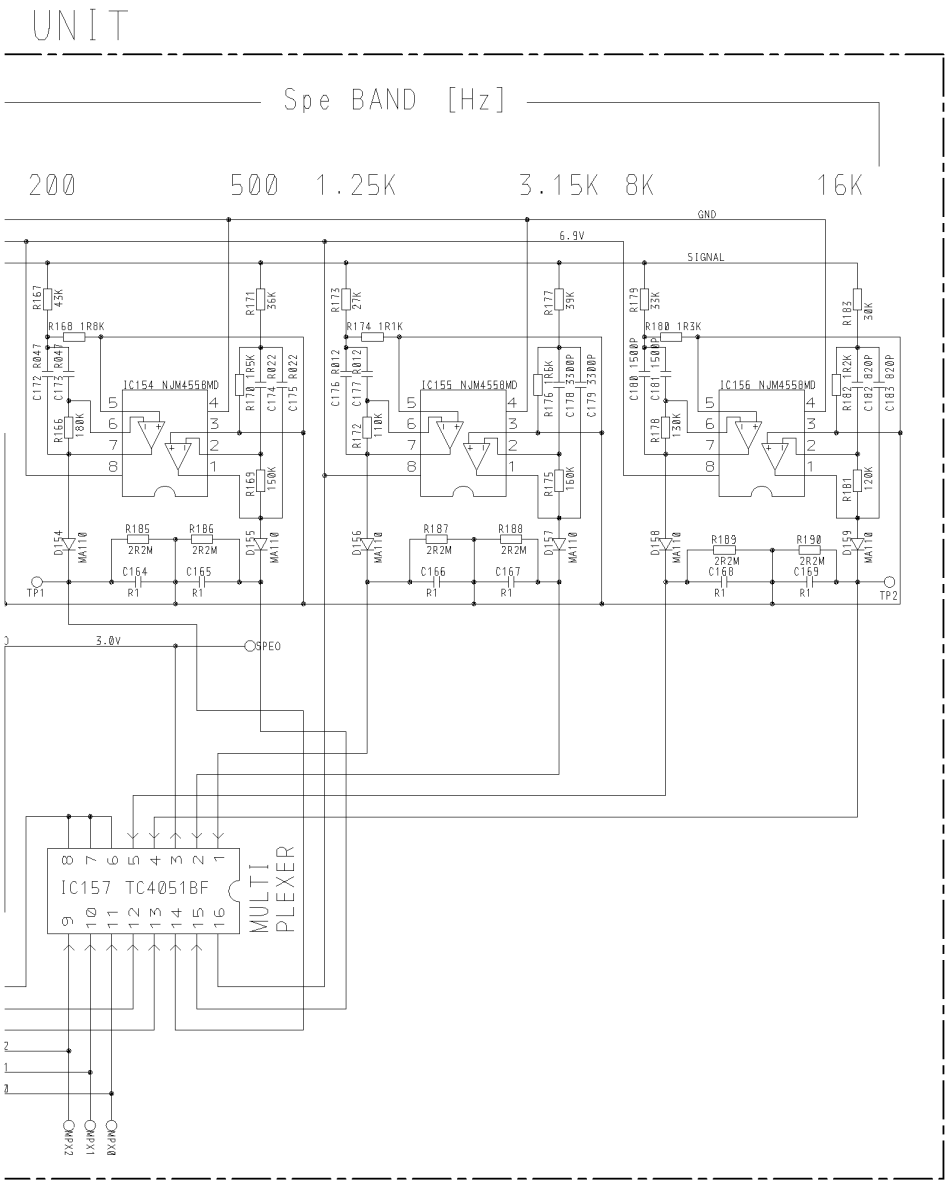

UNIT
Spe BAND [Hz]
200
500
1.25K
3.15K
8K
16K
GND
6.9V
SIGNAL
IC154 NJM4558MD
IC155 NJM4558MD
IC156 NJM4558MD
IC157 TC4051BF
MULTI PLEXER
3.0V
SPEO
TP1
TP2

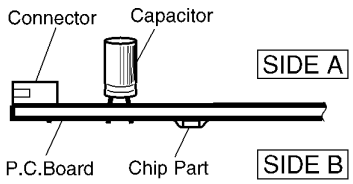
Fig. 12

4. PCB CONNECTION DIAGRAM

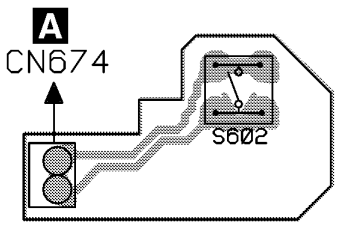
4.1 TUNER AMP UNIT, SWITCH PCB

NOTE FOR PCB DIAGRAMS

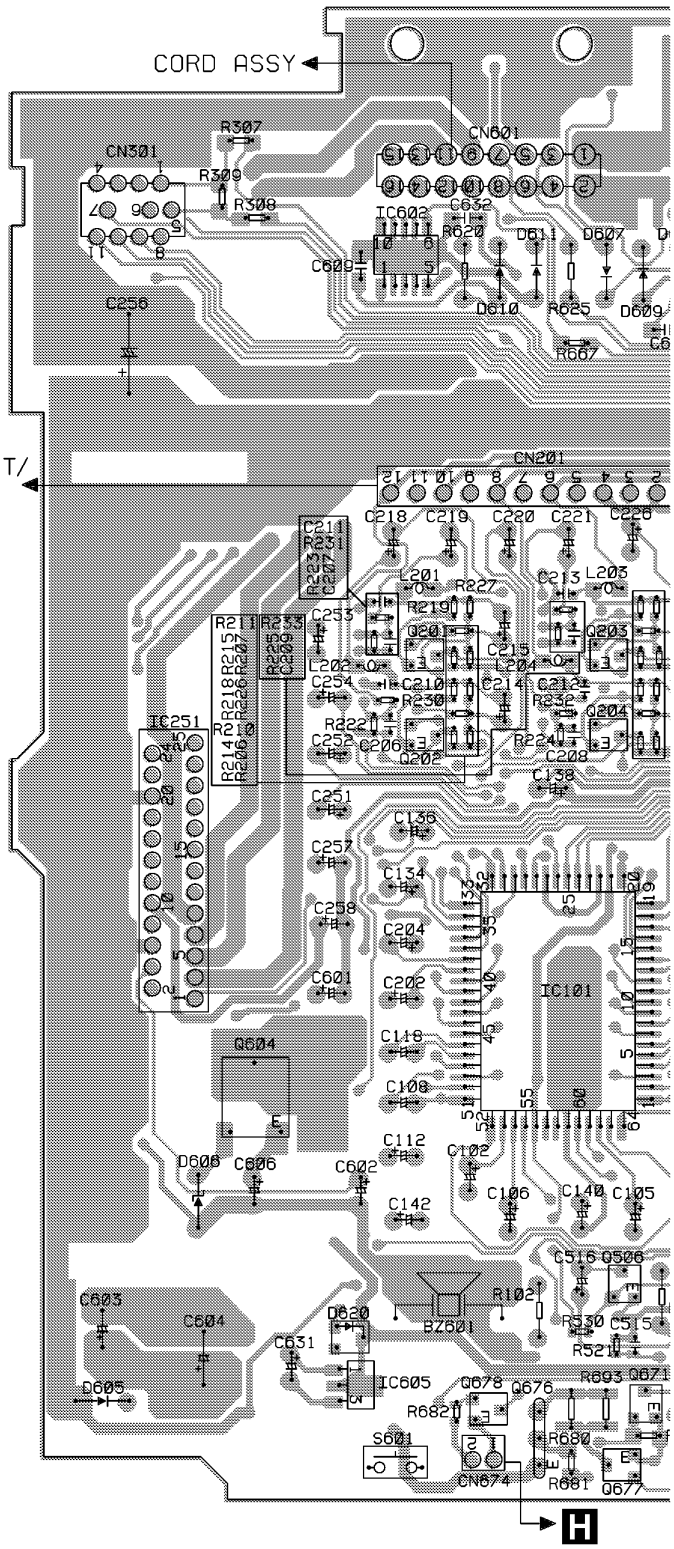
1. The parts mounted on this PCB include all necessary parts for several destination.
   For further information for respective destinations, be sure to check with the schematic diagram.
2. Viewpoint of PCB diagrams



H **SWITCH PCB**



A **TUNER AMP UNIT**



IC, Q	ADJ
IC606 Q674	
IC602 IC601	
Q675 Q673	
Q605 IC603	
Q609 Q631 Q617	
Q606 IC302 IC401	
Q618 Q632 Q402 IC301	
Q201 Q203 Q621	
IC251 Q204	
Q202	
IC604	
IC101 IC552 Q604	
IC502	VR501
Q502	
Q507	
IC551 Q506 Q505	
Q676 Q671 IC605 Q678	
Q677	

SIDE A

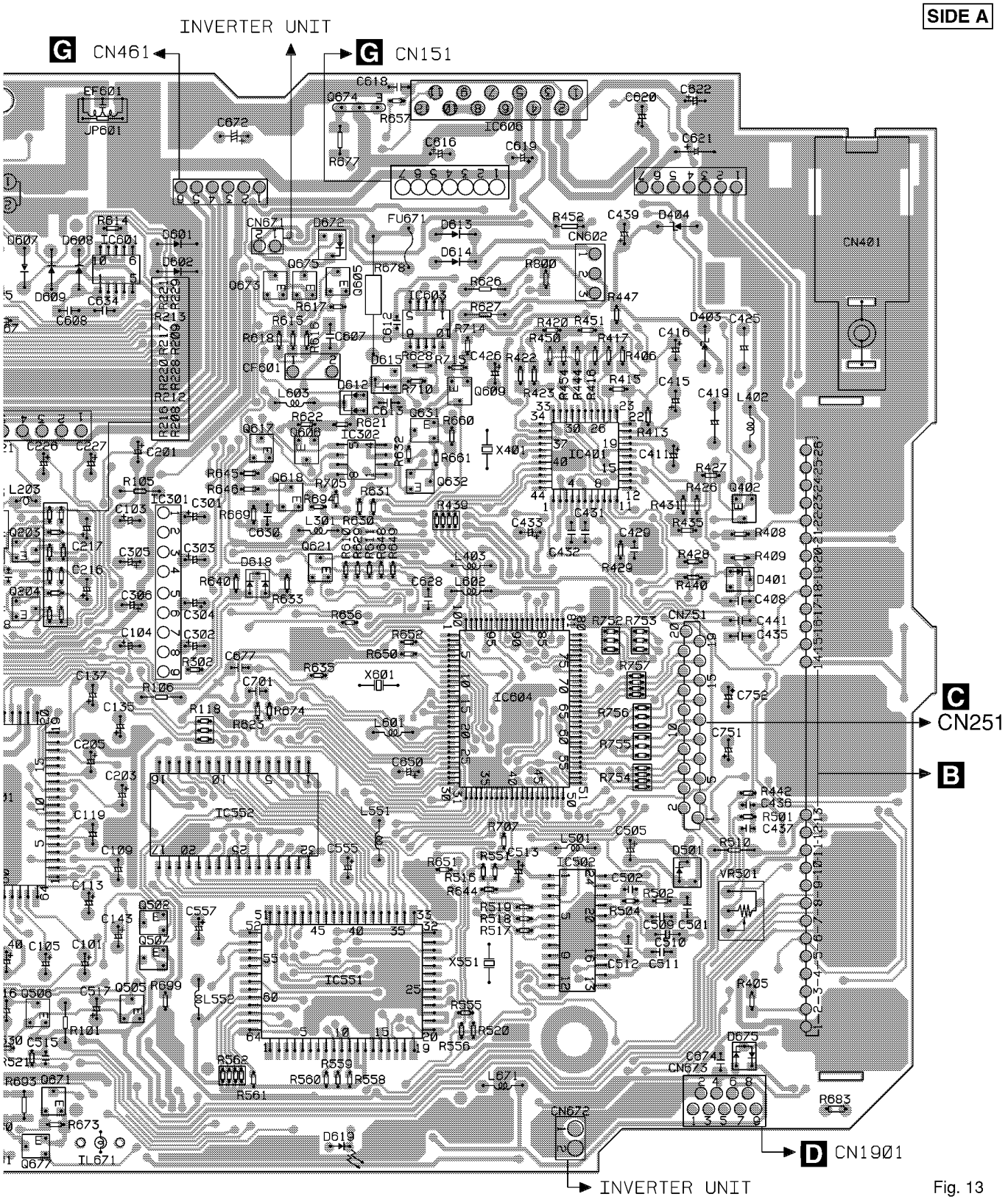
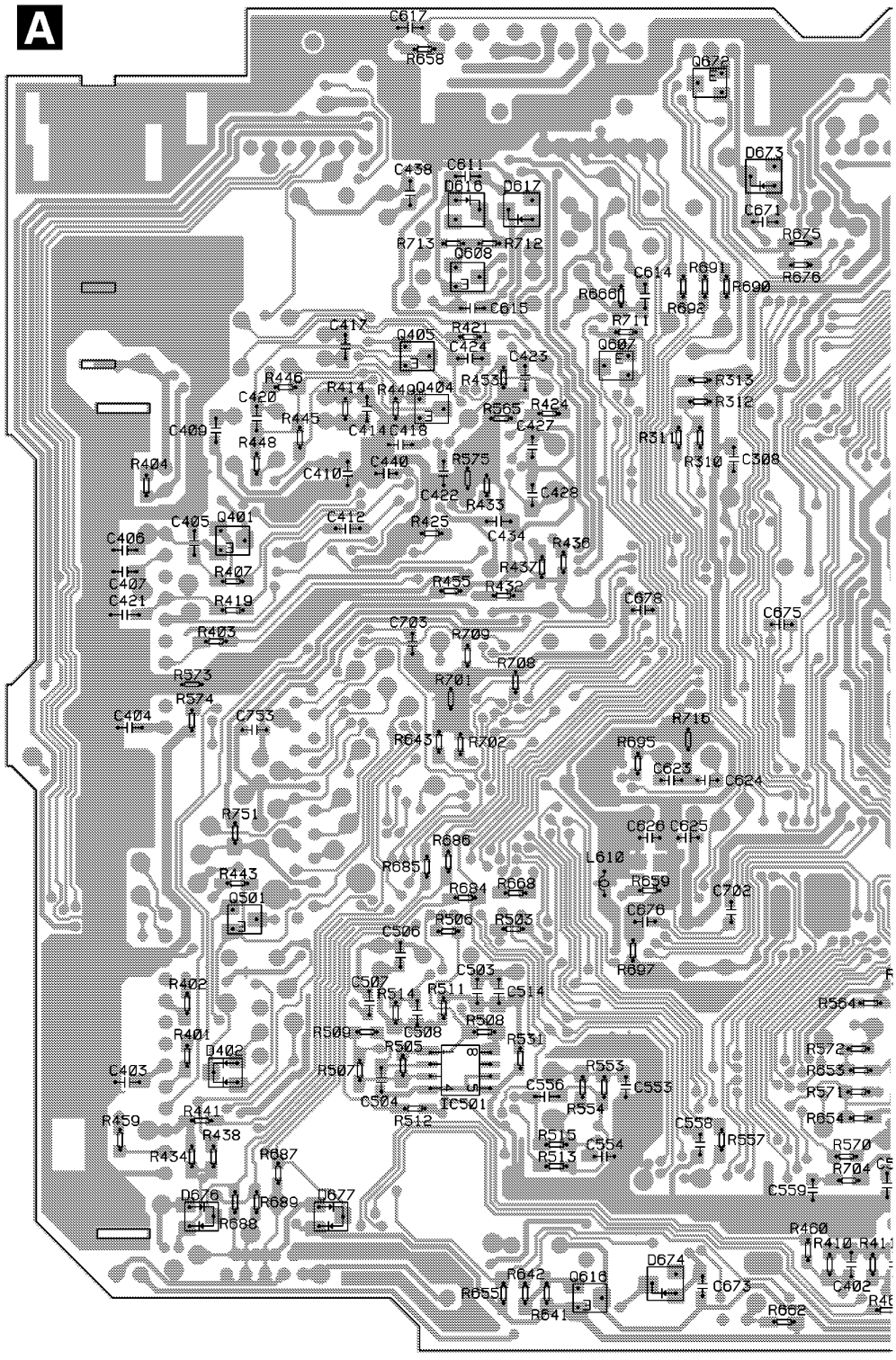
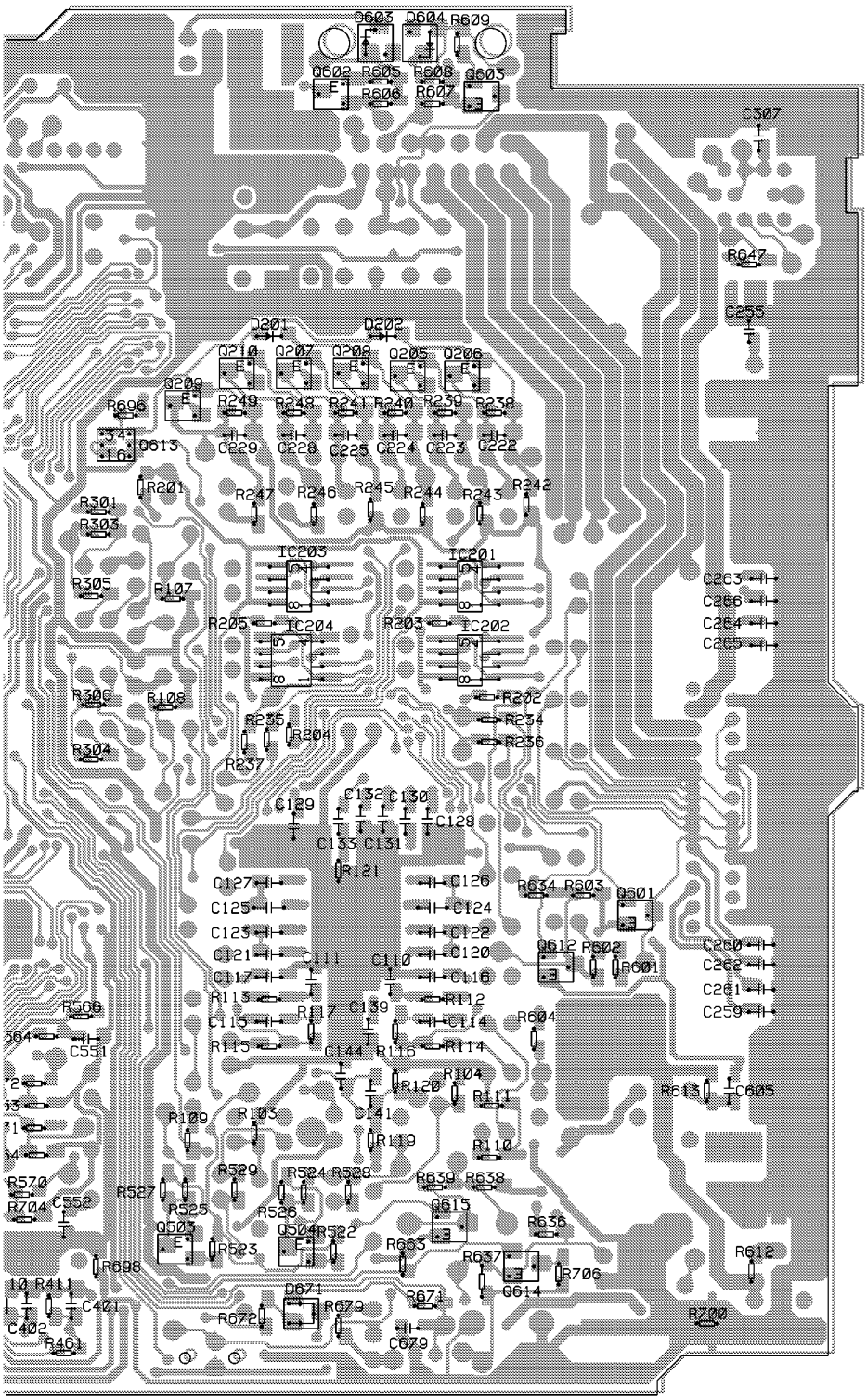

INVERTER UNIT
G CN461
G CN151
C CN251
B
D CN1901
INVERTER UNIT

Fig. 13


A
C617
R658
Q672
D673
C438
C611
D616
D617
C671
R675
R713
R712
Q608
R691
R676
C614
R690
R666
R692
C615
R711
C412
Q405
R421
C424
C423
Q607
R446
R414
R449
Q404
R433
R313
R312
C420
R565
R424
R445
C414
C418
C427
C409
R448
R511
R310
C308
R404
C410
C440
R575
C422
R433
C428
C405
Q401
C412
R425
C434
R436
C406
R437
R407
R455
R432
C407
C421
R419
C678
C675
R403
C705
R709
R708
R573
R701
R574
C404
C753
R716
R643
R702
R695
C623
C624
R751
C626
C625
R686
L610
R685
R443
R659
R684
R668
C702
Q501
C676
R506
R503
C506
R697
C503
R507
C507
R514
R511
C514
R402
R564
R508
R401
C508
R509
R505
R551
R572
Q402
R553
R653
C403
R507
C556
C555
R571
C504
IC501
R554
R654
R441
R512
R459
R438
R515
C558
R557
C554
R570
R434
R687
R513
R704
C559
D676
R689
D677
R688
R460
R410
D674
R642
Q610
C673
C402
R655
R641
R662

SIDE B



IC, Q

Q672 Q602 Q603

Q608

Q405 Q607 Q207
Q210 Q208 Q205 Q206

Q209

Q404

Q613

Q401

IC203 IC201

IC204 IC202

Q601

Q501

Q612

IC501

Q615

Q503 Q504

Q614

Q616

Fig. 14

4.2 FM/AM TUNER UNIT

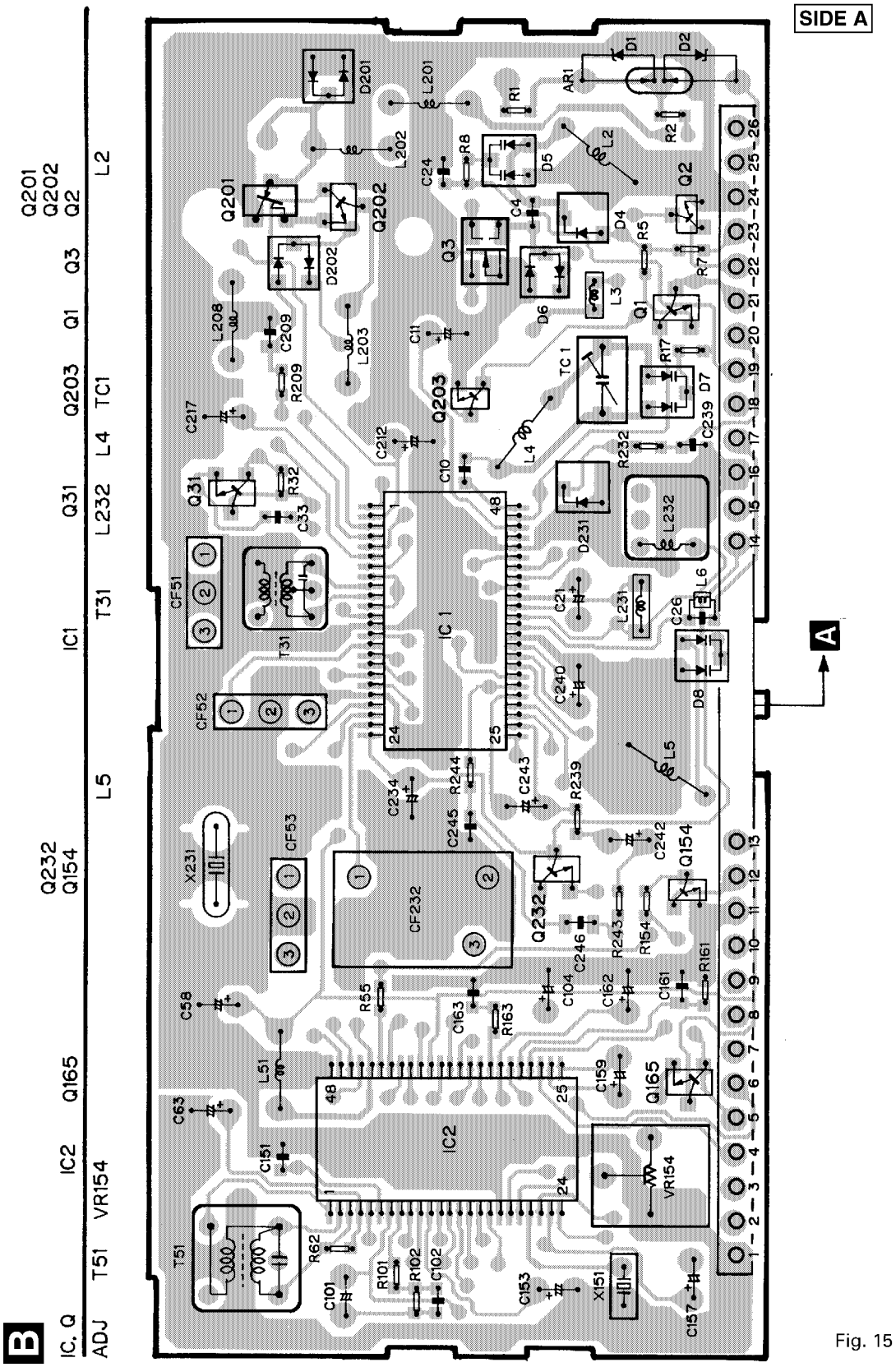
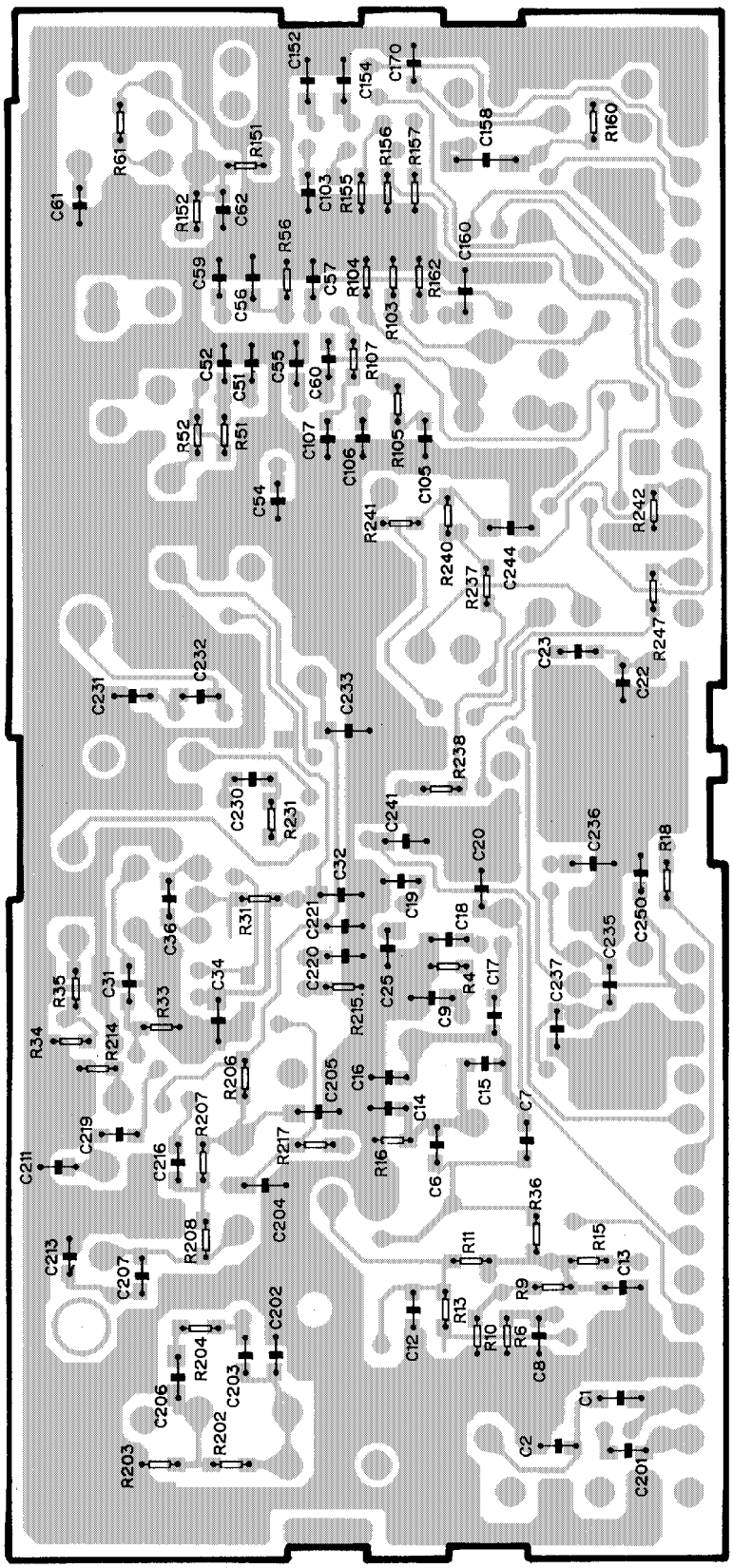


Fig. 15

SIDE B



B

Fig. 16

4.3 CASETTE MECHANISM MODULE

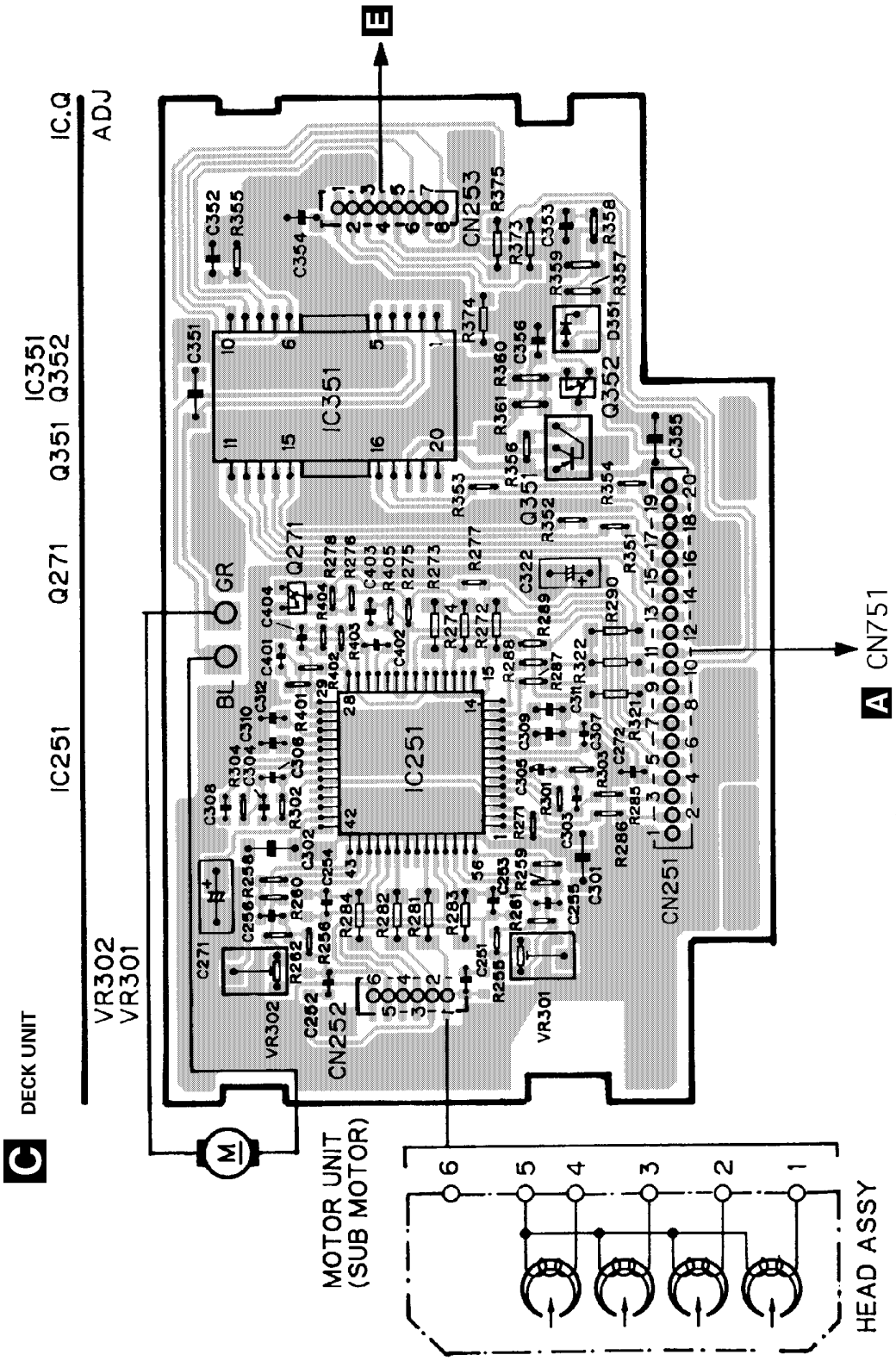


Fig. 17

E PCB UNIT

SIDE A

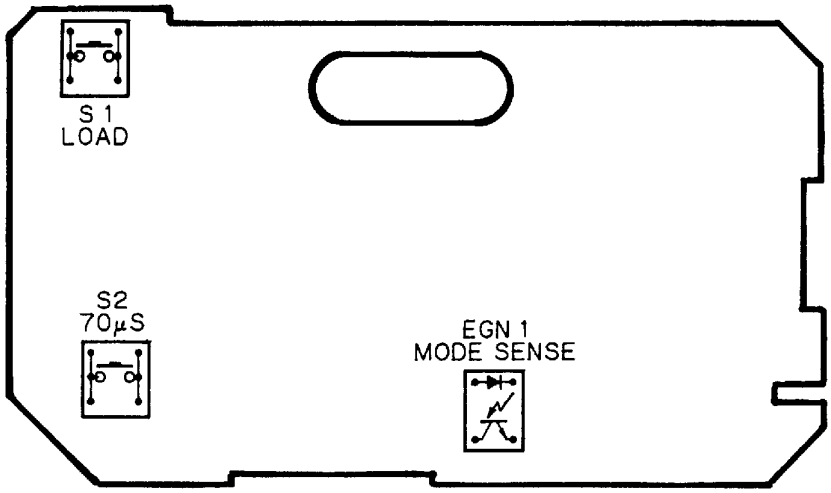


Fig. 18

E PCB UNIT

SIDE B

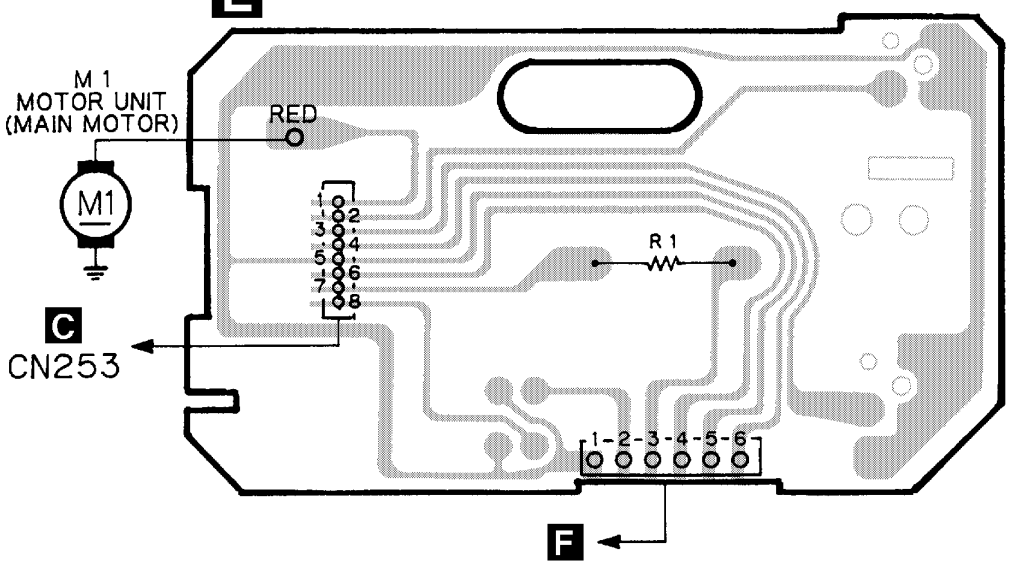


Fig. 19

F REEL PCB

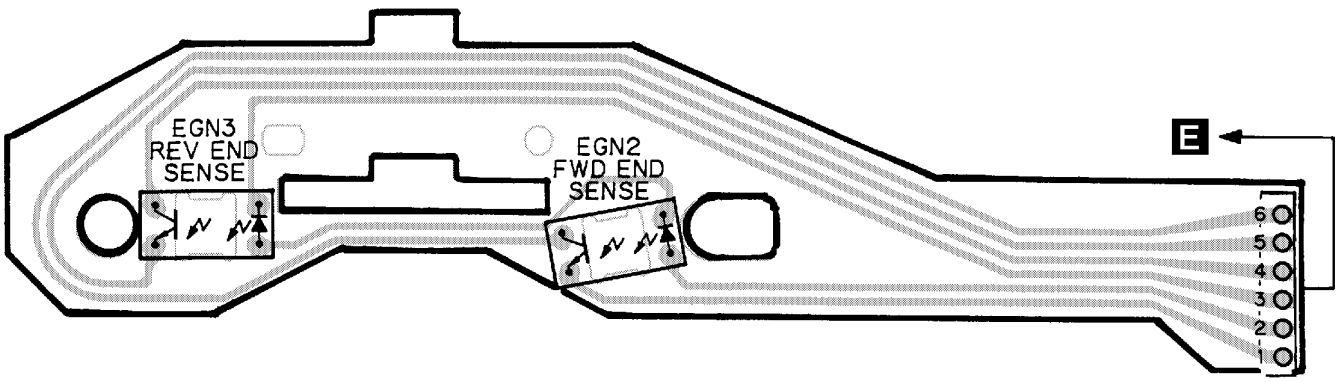


Fig. 20

4.4 KEYBOARD UNIT PCB

● KEH-P8600R/EW

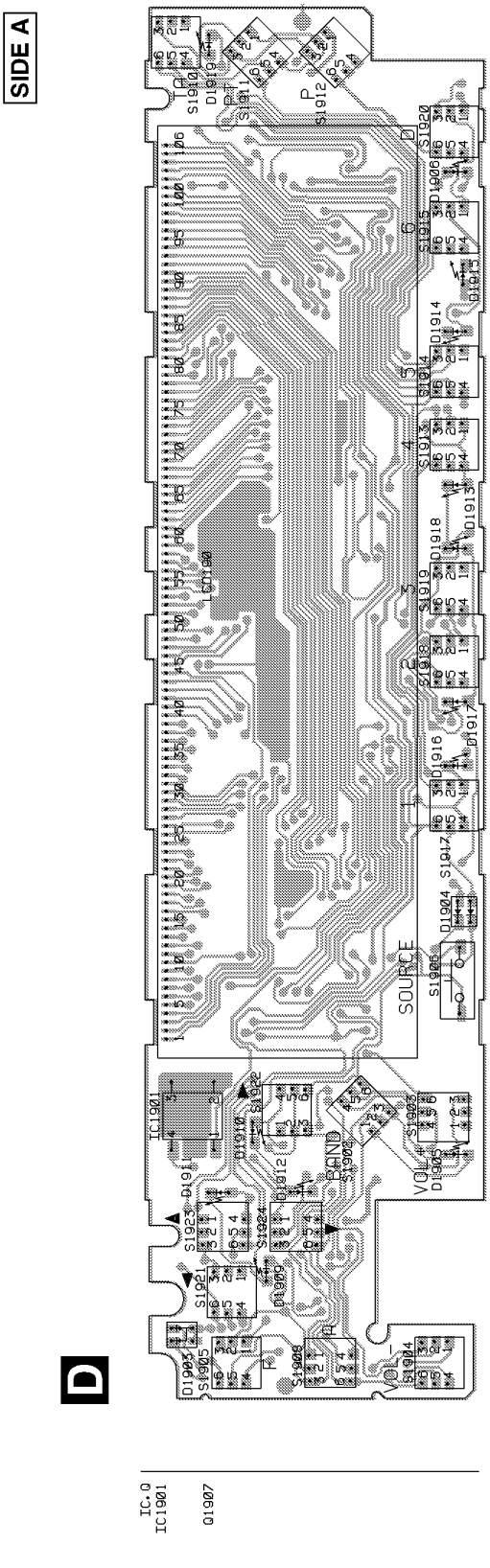


Fig. 21

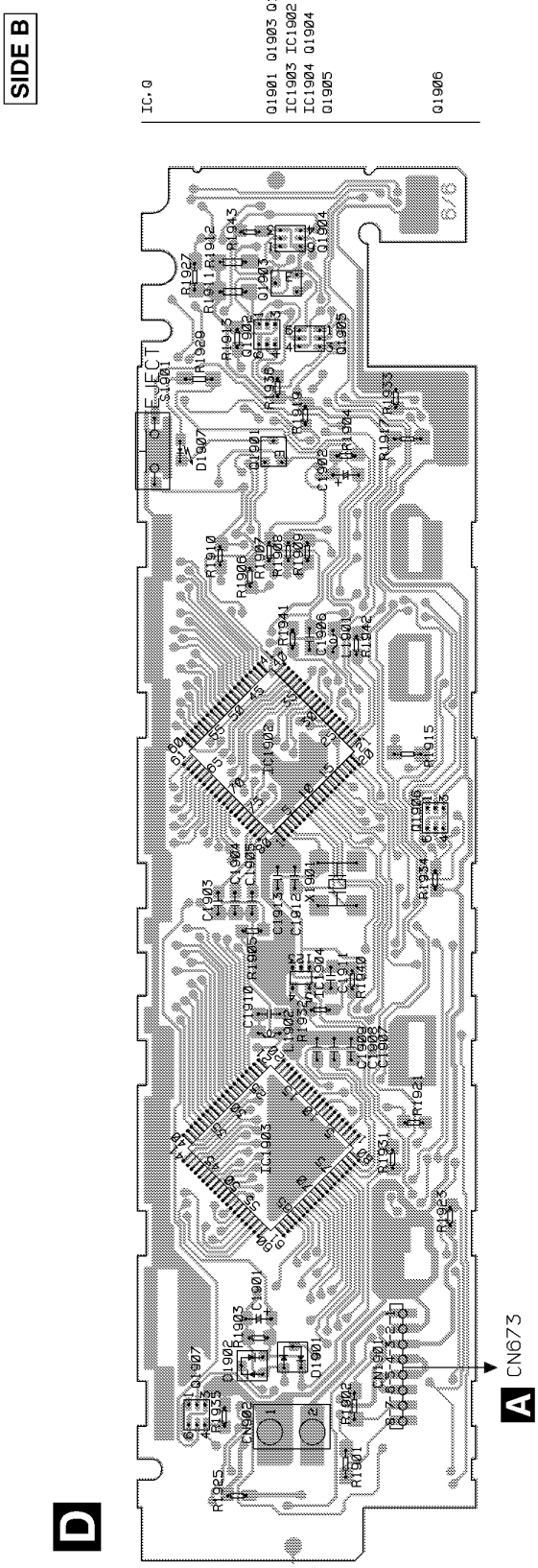


Fig. 22

● **KEH-P7600R/EW**

SIDE A

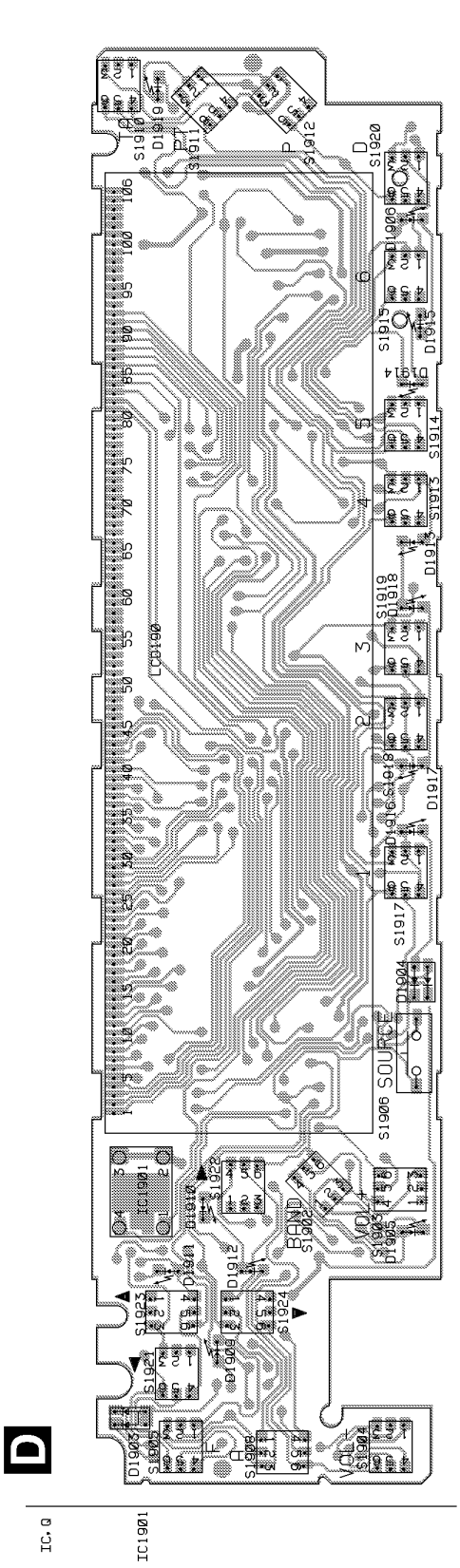


Fig. 23

SIDE B

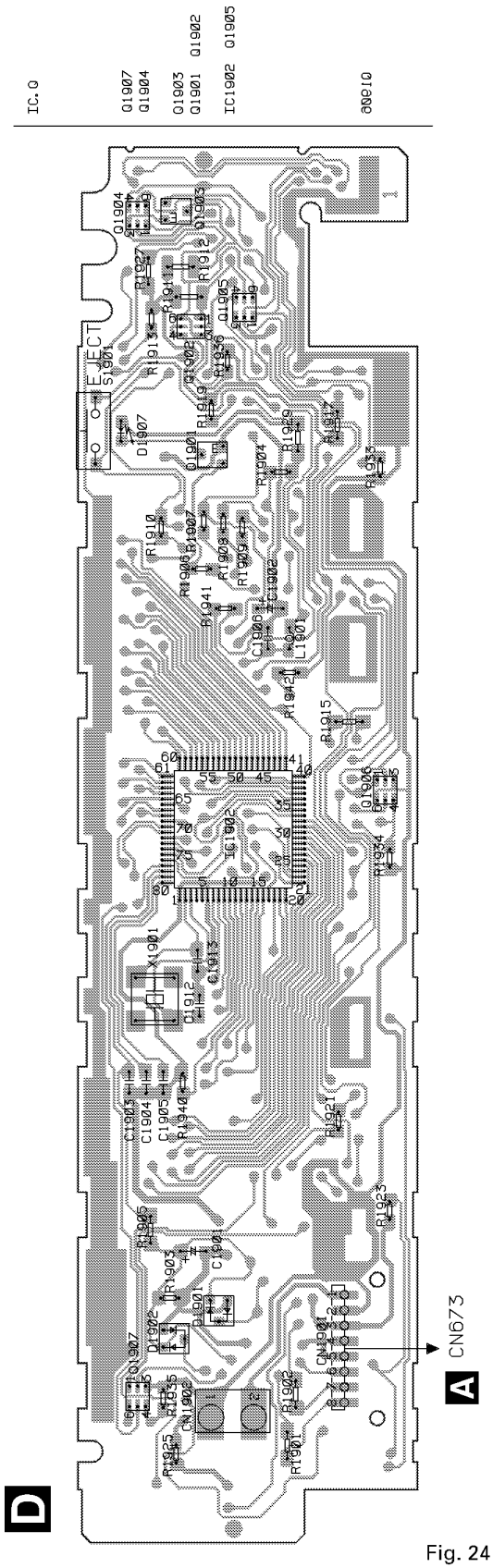


Fig. 24

4.5 SPECTRUM ANALIZER MAIN UNIT

● KEH-P8600R/EW

SIDE A

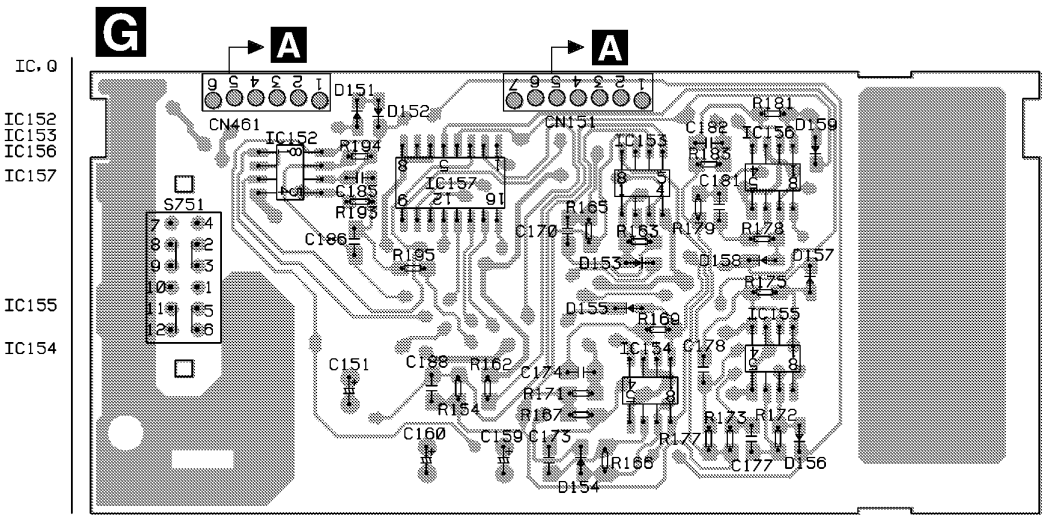


Fig. 25

SIDE B

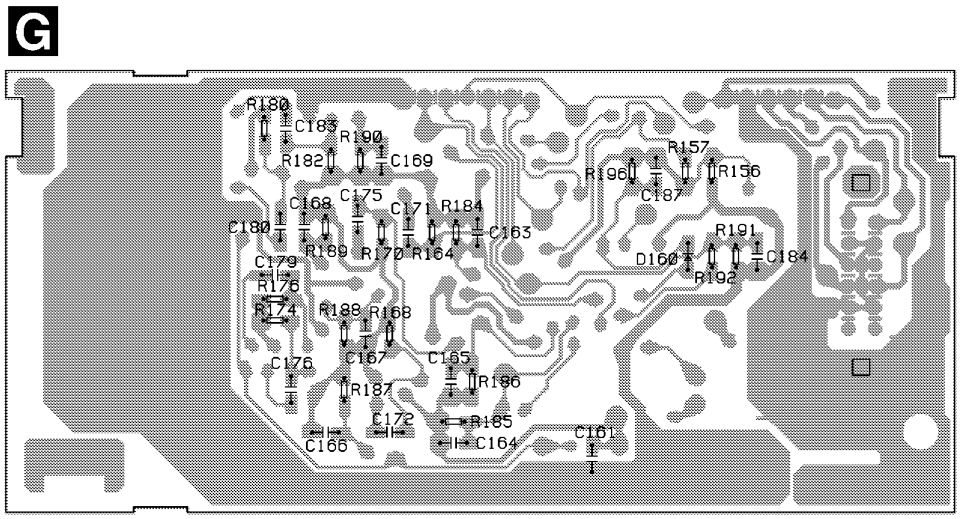


Fig. 26

5. ELECTRICAL PARTS LIST

NOTE:

- Parts whose parts numbers are omitted are subject to being not supplied.
- The part numbers shown below indicate chip components.

Chip Resistor

RS1/○S○○○J,RS1/○○S○○○J

Chip Capacitor (except for CQS.....)

CKS....., CCS....., CSZS.....

=====Circuit Symbol & No.	===	Part Name	Part No.
B	Unit Number : CWE1416		
	Unit Name : FM/AM Tuner Unit		
MISCELLANEOUS			
IC	1	IC	PA4023B
IC	2	IC	PA4024A
Q	1	Transistor	2SC2412KLN
Q	2	Transistor	DTC124EU
Q	3	FET	3SK263
Q	31	Transistor	2SC2412KLN
Q	154	Transistor	DTC124EU
Q	165	Transistor	2SC2412KLN
Q	201	FET	2SK932
Q	202	Transistor	2SC2412KLN
Q	203	Transistor	DTC124EU
D	4	Diode	1SV250
D	5	Diode	KV1410-F1
D	6	Diode	MA157
D	7	Diode	KV1410-F1
D	8	Diode	KV1410-F1
D	201	Diode	MA157
D	202	Diode	MA157
D	231	Diode	SVC253
L	2	Coil	CTC1108
L	3	Inductor	LCTB2R2K2125
L	4	Coil	CTC1108
L	5	Coil	CTC1107
L	6	Inductor	LCTBR15K1608
L	51	Ferri-Inductor	LAU150K
L	201	Ferri-Inductor	LAU4R7K
L	202	Ferri-Inductor	LAU330K
L	203	Inductor	CTF1287
L	208	Inductor	LAU121K
L	231	Inductor	LCTA3R3J3225
T	31	Coil	CTE1116
T	51	Coil	CTC1136
TC	1	Capacitor	CCL1038
CF	51	Ceramic Filter	CTF1292
CF	52	Ceramic Filter	CTF1292
CF	53	Ceramic Filter	CTF1292
CF	232	Ceramic Filter	CTF1348
X	151	Resonator 920.5kHz	CSS1365
X	231	Crystal Resonator 10.26MHz	CSS1111
VR	154	Semi-fixed 150kΩ(B)	CCP1213
AR	1	Capacitor with Discharge Gap	DSP-201M
RESISTORS			
R	1		RS1/16S0R0J
R	4		RS1/16S154J
R	5		RS1/16S391J
R	6		RS1/16S223J
R	7		RS1/16S123J
R	8		RS1/16S332J
R	9		RS1/16S473J
R	10		RS1/16S223J
R	11		RS1/16S124J
R	13		RS1/16S563J
R	15		RS1/16S271J
R	16		RS1/16S104J
R	17		RS1/16S332J
R	18		RS1/16S332J
R	31		RS1/16S470J
R	32		RS1/16S822J
R	33		RS1/16S822J
R	34		RS1/16S331J
R	35		RS1/16S331J
R	51		RS1/16S271J
R	52		RS1/16S560J
R	55		RS1/16S102J
R	56		RS1/16S823J
R	61		RS1/16S392J
R	62		RS1/16S393J
R	101		RS1/16S272J
R	102		RS1/16S682J
R	103		RS1/16S333J
R	104		RS1/16S334J
R	105		RS1/16S683J
R	107		RS1/16S222J
R	151		RS1/16S222J
R	152		RS1/16S393J
R	154		RS1/16S104J
R	155		RS1/16S273J
R	156		RS1/16S243J
R	157		RS1/16S203J
R	160		RS1/16S222J
R	161		RS1/16S563J
R	162		RS1/16S105J
R	163		RS1/16S222J
R	202		RS1/16S223J
R	203		RS1/16S225J
R	204		RS1/16S103J
R	206		RS1/16S220J
R	207		RS1/16S101J
R	208		RS1/16S102J
R	209		RS1/16S471J
R	214		RS1/16S822J
R	215		RS1/16S822J
R	217		RS1/16S102J
R	231		RS1/16S272J
R	232		RS1/16S473J
R	237		RS1/16S103J
R	238		RS1/16S104J
R	239		RS1/16S104J
R	240		RS1/16S332J
R	241		RS1/16S202J
R	243		RS1/16S123J
R	244		RS1/16S103J

=====Circuit Symbol & No.	===Part Name	Part No.
R 247		RS1/16S123J
CAPACITORS		
C 1		CCSQCH6R0D50
C 2		CCSRCK2R0C50
C 4		CCSRCH820J50
C 6		CCSRCH820J50
C 8		CKSRYB103K25
C 9		CKSQYB104K16
C 10		CCSRCKR50C50
C 11		CEJA1R0M50
C 12		CKSRYB222K50
C 13		CKSRYB222K50
C 14		CCSRCH220J50
C 16		CCSRCH8R0D50
C 17		CKSRYB222K50
C 18		CKSRYB103K25
C 19		CKSRYB222K50
C 20		CKSRYB222K50
C 21		CEJA100M16
C 22		CCSRTH9R0D50
C 23		CCSRTH120J50
C 24		CCSRCH471J50
C 25		CKSRYB103K25
C 31		CKSRYB103K25
C 32		CKSQYB472K50
C 33		CCSRCH5R0C50
C 34		CKSQYB104K16
C 36		CCSRRH201J50
C 51		CKSRYB223K25
C 52		CKSRYB103K25
C 54		CCSRCH470J50
C 55		CKSQYB223K25
C 56		CKSQYB104K16
C 57		CKSRYB472K50
C 58		CEJA330M10
C 59		CKSRYB103K25
C 61		CCSRCH270J50
C 62		CKSRYB103K25
C 63		CEJAR15M50
C 101		CEJANP100M10
C 102		CKSRYB182K50
C 103		CKSRYB682K25
C 104		CEJA2R2M50
C 105		CKSRYB103K25
C 106		CCSRCH151J50
C 107		CKSRYB103K25
C 151		CKSRYB472K50
C 152		CKSQYB104K16
C 153		CEJA3R3M50
C 154		CKSQYB104K16
C 157		CEJA3R3M50
C 158		CKSYB474K16
C 159		CEJA220M6R3
C 160		CKSQYB104K16
C 161		CKSQYB104K16
C 162		CEJA3R3M50
C 163		CKSRYB102K50
C 170		CCSRCH100D50
C 201		CCSRCH471J50
C 202		CCSRCH100D50
C 203		CKSRYB332K50
C 204		CKSQYB473K16
C 205		CKSQYB473K16
C 206		CKSQYB104K16
C 207		CCSRCH560J50
C 209		CKSQYB104K16
C 211		CCSRCH101J50

=====Circuit Symbol & No.	===Part Name	Part No.
C 212		CEJA470M6R3
C 213		CKSRYB103K25
C 216		CCSRCH101J50
C 217		CEJA1R5M50
C 219		CCSRCH471J50
C 220		CKSRYB103K25
C 230		CKSRYB103K25
C 231		CCSRCH330J50
C 232		CCSRCH150J50
C 233		CKSQYB104K16
C 234		CEJA330M10
C 235		CKSRYB332K50
C 236		CKSQYB473K16
C 237		CCSRCH120J50
C 239		CKSRYB472K50
C 240		CEJAR47M50
C 241		CKSQYB104K16
C 242		CEJAR47M50
C 243		CEJAR33M50
C 244		CKSQYB473K16
C 245		CKSRYB123K25
C 246		CKSQYB473K16
C 250		CCSRCH471J50

A Unit Number : CWM5336
Unit Name : Tuner Amp Unit (KEH-P8600R/EW)

MISCELLANEOUS

IC 101	IC		PM0008BF
IC 201	IC		See Contrast table
IC 202	IC		See Contrast table
IC 203	IC		See Contrast table
IC 204	IC		See Contrast table
IC 251	IC		TDA7386
IC 301	IC		TA2050S
IC 302	IC		CA0008AM
IC 401	IC		PM2005B
IC 501	IC		NJM2903M
IC 502	IC		PMW001B
IC 601	IC		TPD1018F
IC 602	IC		TPD1018F
IC 604	IC		PD4792A
IC 605	IC		S-80734ANDYI
IC 606	IC		PA2024A
Q 201	Transistor		See Contrast table
Q 202	Transistor		See Contrast table
Q 203	Transistor		See Contrast table
Q 204	Transistor		See Contrast table
Q 205	Transistor		DTC314TK
Q 206	Transistor		DTC314TK
Q 207	Transistor		DTC314TK
Q 208	Transistor		DTC314TK
Q 209	Transistor		DTC314TK
Q 210	Transistor		DTC314TK
Q 401	Transistor		2SC2412K
Q 402	Transistor		DTC124EK
Q 501	Transistor		2SC2412K
Q 502	Transistor		2SC2412K
Q 503	Transistor		2SD1757K
Q 504	Transistor		2SD1757K
Q 505	Transistor		DTC114TK
Q 506	Transistor		DTC114TK
Q 507	Transistor		DTC114TK
Q 601	Transistor		DTC124EK
Q 602	Transistor		2SC2412K
Q 603	Transistor		2SC2412K
Q 604	Transistor		2SD1760F5
Q 605	Transistor		2SC2412K

Circuit Symbol & No.	Part Name	Part No.
Q 606	Transistor	2SA1037K
Q 607	Transistor	2SC2412K
Q 608	Transistor	2SC2412K
Q 609	Transistor	2SC2412K
Q 612	Transistor	DTC124EK
Q 613	Transistor	IMD2A
Q 614	Transistor	DTA144TK
Q 615	Transistor	DTC124EK
Q 616	Transistor	2SA1037K
Q 617	Transistor	2SA1037K
Q 618	Transistor	DTC114EK
Q 621	Transistor	DTA114EK
Q 631	Transistor	2SA1037K
Q 632	Transistor	DTC124EK
Q 671	Transistor	2SC3295
Q 672	Transistor	2SA1037K
Q 673	Transistor	DTC114EK
Q 674	Transistor	2SD1189
Q 675	Transistor	DTC114EK
Q 676	Transistor	2SB1243
Q 677	Transistor	DTC143EK
Q 678	Transistor	2SC3295
D 201	Diode	MA110
D 202	Diode	MA110
D 401	Chip Diode	MA151K
D 402	Chip Diode	MA151K
D 501	Diode	MA3047(M)
D 601	Diode	ERA15-02VH
D 602	Diode	ERA15-02VH
D 603	Diode	MA3075(M)
D 604	Diode	MA3062(H)
D 605	Diode	ERA15-02VH
D 606	Diode	HZS6L(B1)
D 607	Diode	ERA15-02VH
D 608	Diode	ERA15-02VH
D 609	Diode	ERA15-02VH
D 610	Diode	ERA15-02VH
D 611	Diode	ERA15-02VH
D 612	Chip Diode	MA151WK
D 615	Diode	MA3150(M)
D 616	Diode	MA3150(M)
D 617	Diode	MA3150(M)
D 618	Chip Diode	MA151WK
D 619	LED	BR4361F
D 620	Chip Diode	MA151K
D 671	Chip Diode	MA151WK
D 672	Diode	MA3047(M)
D 673	Diode	MA3075(M)
D 674	Diode	MA3062(M)
D 675	Diode	MA153
D 676	Diode	MA153
D 677	Diode	MA153
L 201	Inductor	See Contrast table
L 202	Inductor	See Contrast table
L 203	Inductor	See Contrast table
L 204	Inductor	See Contrast table
L 301	Ferri-Inductor	LAU2R2K
L 402	Ferri-Inductor	LAU101K
L 403	Ferri-Inductor	LAU2R2K
L 501	Ferri-Inductor	LAU101K
L 601	Ferri-Inductor	LAU2R2K
L 602	Ferri-Inductor	LAU101K
L 603	Ferri-Inductor	LAU2R2K
L 610	Inductor	LCTB2R7K2125
L 671	Ferri-Inductor	LAU2R2K

Circuit Symbol & No.	Part Name	Part No.
CF 601	Filter	CTF1071
X 401	Crystal Resonator 7.200MHz	CSS1379
X 551	Crystal Resonator 4.332MHz	CSS1056
X 601	Resonator 12.58291MHz	CSS1402
S 601	Switch	CSG1059
IL 671	Lamp 14V 40mA	CEL1263
VR 501	Semi-fixed 22kΩ(B)	CCP1321
FU 671	Fuse 0.4A	ICP-N10
	FM/AM Tuner Unit	CWE1416
	Spectrum Analyzer Main Unit	See Contrast table
BZ 601	Buzzer	CPV1011

RESISTORS

R 101		RD1/4PU272J
R 102		RD1/4PU272J
R 103		RS1/10S562J
R 104		RS1/10S562J
R 105		RD1/4PU152J
R 106		RD1/4PU152J
R 107		RS1/10S392J
R 108		RS1/10S392J
R 109		See Contrast table
R 110		See Contrast table
R 112		RS1/10S101J
R 113		RS1/10S101J
R 114		RS1/10S151J
R 115		RS1/10S151J
R 116		RS1/10S272J
R 117		RS1/10S272J
R 118		RA3C472J
R 119		RS1/10S183J
R 120		RS1/10S102J
R 121		RS1/10S0R0J
R 201		See Contrast table
R 202		See Contrast table
R 203		See Contrast table
R 204		See Contrast table
R 205		See Contrast table
R 206		See Contrast table
R 207		See Contrast table
R 208		See Contrast table
R 209		See Contrast table
R 210		See Contrast table
R 211		See Contrast table
R 212		See Contrast table
R 213		See Contrast table
R 214		See Contrast table
R 215		See Contrast table
R 216		See Contrast table
R 217		See Contrast table
R 218		See Contrast table
R 219		See Contrast table
R 220		See Contrast table
R 221		See Contrast table
R 222		See Contrast table
R 223		See Contrast table
R 224		See Contrast table
R 225		See Contrast table
R 226		See Contrast table
R 227		See Contrast table
R 228		See Contrast table
R 229		See Contrast table
R 230		See Contrast table
R 231		See Contrast table
R 232		See Contrast table
R 233		See Contrast table
R 234		RS1/10S821J
R 235		RS1/10S821J

=====Circuit Symbol & No.===Part Name			Part No.	=====Circuit Symbol & No.===Part Name			Part No.
R	236		RS1/10S821J	R	454		RS1/10S0R0J
R	237		RS1/10S821J	R	455		RS1/10S0R0J
R	238		RS1/10S224J	R	460		RS1/10S0R0J
R	239		RS1/10S224J	R	461		RS1/10S0R0J
R	240		RS1/10S224J	R	501		RS1/16S103J
R	241		RS1/10S224J	R	502		RS1/10S562J
R	246		RS1/10S821J	R	503		RS1/10S104J
R	247		RS1/10S821J	R	504		RS1/16S104J
R	248		RS1/10S223J	R	505		RS1/10S684J
R	249		RS1/10S223J	R	506		RS1/10S681J
R	301		RS1/10S181J	R	507		RS1/10S222J
R	302		RS1/16S181J	R	508		RS1/10S562J
R	303		RS1/10S223J	R	509		RS1/10S222J
R	304		RS1/10S223J	R	510		RD1/4PU151J
R	305		RS1/10S102J	R	511		RS1/10S0R0J
R	306		RS1/10S102J	R	512		RS1/10S102J
R	307		RS1/10S101J	R	513		RS1/10S0R0J
R	308		RS1/10S101J	R	514		RS1/10S333J
R	309		RS1/10S620J	R	515		RS1/10S0R0J
R	310		RS1/10S102J	R	516		RS1/16S102J
R	311		RS1/10S102J	R	517		RS1/16S102J
R	312		RS1/10S473J	R	518		RS1/16S102J
R	313		RS1/10S473J	R	519		RS1/16S102J
R	401		RS1/10S0R0J	R	520		RS1/16S681J
R	402		RS1/10S102J	R	521		RS1/16S224J
R	403		RS1/10S0R0J	R	522		RS1/10S224J
R	404		RS1/10S0R0J	R	523		RS1/10S224J
R	405		RS1/10S0R0J	R	524		RS1/10S222J
R	406		RS1/10S102J	R	525		RS1/10S222J
R	407		RS1/10S222J	R	526		RS1/10S223J
R	408		RS1/10S222J	R	527		RS1/10S223J
R	409		RS1/10S105J	R	530		RS1/16S472J
R	410		RS1/10S272J	R	553		RS1/10S222J
R	411		RS1/10S272J	R	554		RS1/10S105J
R	413		RS1/10S681J	R	573		RS1/10S0R0J
R	414		RS1/10S682J	R	601		RS1/10S101J
R	415		RS1/10S472J	R	602		RS1/10S221J
R	416		RS1/10S472J	R	603		RS1/10S103J
R	417		RS1/10S682J	R	604		RS1/10S103J
R	419		RS1/10S103J	R	605		RS1/10S473J
R	420		RS1/10S222J	R	606		RS1/10S223J
R	421		RS1/10S152J	R	607		RS1/10S472J
R	422		RS1/10S272J	R	608		RS1/10S473J
R	423		RS1/10S392J	R	609		RS1/10S223J
R	424		RS1/10S392J	R	610		RS1/16S473J
R	425		RS1/10S0R0J	R	611		RS1/16S473J
R	426		RS1/10S0R0J	R	612		RS1/10S101J
R	427		RS1/10S102J	R	613		RS1/10S392J
R	428		RS1/10S222J	R	614		RS1/10S103J
R	429		RS1/10S102J	R	615		RS1/10S473J
R	432		RS1/10S562J	R	616		RS1/10S103J
R	433		RS1/10S473J	R	617		RS1/16S473J
R	434		RS1/10S473J	R	618		RS1/10S103J
R	435		RS1/10S562J	R	620		RD1/4PU153J
R	436		RS1/10S473J	R	621		RS1/10S472J
R	437		RS1/10S472J	R	622		RS1/10S472J
R	438		RS1/10S473J	R	623		RS1/16S102J
R	439		RA4C102J	R	625		RD1/4PU102J
R	440		RS1/10S102J	R	626		RD1/4PU102J
R	441		RS1/10S472J	R	627		RD1/4PU102J
R	442		RS1/16S103J	R	629		RS1/16S473J
R	443		RS1/10S393J	R	630		RS1/16S473J
R	444		RS1/10S0R0J	R	631		RS1/16S473J
R	448		RS1/10S561J	R	632		RS1/16S103J
R	451		RS1/10S0R0J	R	633		RS1/10S473J

=====Circuit Symbol & No.	===Part Name	Part No.
R 634		RS1/10S103J
R 635		RS1/16S102J
R 636		RS1/10S822J
R 638		RS1/10S152J
R 639		RS1/10S152J
R 640		RS1/10S182J
R 641		RS1/10S472J
R 642		RS1/10S472J
R 645		RS1/10S223J
R 646		RS1/10S472J
R 647		RS1/10S222J
R 648		RS1/16S473J
R 650		RS1/16S104J
R 651		RS1/16S473J
R 652		RS1/16S473J
R 655		RS1/10S473J
R 656		RS1/16S223J
R 657		RS1/16S102J
R 658		RS1/10S102J
R 659		RS1/10S473J
R 660		RS1/10S223J
R 661		RS1/16S223J
R 662		RS1/10S751J
R 663		RS1/10S473J
R 666		RS1/10S473J
R 667		RS1/10S103J
R 668		RS1/10S473J
R 669		RS1/10S102J
R 671		RS1/10S184J
R 672		RS1/10S224J
R 673		RS1/10S224J
R 674		RS1/16S472J
R 675		RS1/10S473J
R 676		RS1/10S472J
R 677		RS1/4S681J
R 678		RS2PMF6R8J
R 679		RS1/10S222J
R 680		RS1/4S122J
R 681		RS1/10S1R0J
R 682		RS1/16S104J
R 683		RS2PMF330J
R 684		RS1/10S222J
R 685		RS1/10S472J
R 686		RS1/10S472J
R 687		RS1/10S222J
R 688		RS1/10S472J
R 689		RS1/10S472J
R 690		See Contrast table
R 691		See Contrast table
R 692		See Contrast table
R 693		RS1/4S122J
R 694		RS1/16S473J
R 695		RS1/10S102J
R 696		RS1/10S102J
R 698		RS1/10S0R0J
R 700		RS1/10S0R0J
R 702		RS1/10S0R0J
R 705		RS1/16S103J
R 706		RS1/10S471J
R 708		RS1/10S473J
R 710		RS1/10S223J
R 711		RS1/10S272J
R 712		RS1/10S124J
R 713		RS1/10S123J
R 714		RS1/10S223J

=====Circuit Symbol & No.	===Part Name	Part No.
R 715		RS1/10S272J
R 716		RS1/10S0R0J
R 751		RS1/10S220J
R 752		RA3C473J
R 753		RA3C473J
R 754		RA4C222J
R 755		RA3C222J
R 756		RA3C222J
R 757		RA4C681J
R 800		RS1/10S0R0J
CAPACITORS		
C 101		CEJA100M16
C 102		CEJA100M16
C 103		CEJA100M16
C 104		CEJA100M16
C 105		CEJA1R0M50
C 106		CEJA1R0M50
C 108		CEJANP100M10
C 109		CEJANP100M10
C 110		CKSQYB152K50
C 111		CKSQYB152K50
C 112		CEJA1R0M50
C 113		CEJA1R0M50
C 114		CKSQYB822K50
C 115		CKSQYB822K50
C 116		CKSQYB183K50
C 117		CKSQYB183K50
C 118		CEJANP100M10
C 119		CEJANP100M10
C 120		CKSQYB334K16
C 121		CKSQYB334K16
C 122		CKSQYB103K25
C 123		CKSQYB103K25
C 124		CKSYB105K16
C 125		CKSYB105K16
C 126		CKSQYB823K25
C 127		CKSQYB823K25
C 128		CKSQYB333K25
C 129		CKSQYB333K25
C 130		CKSQYB104K16
C 131		CKSQYB562K50
C 132		CKSQYB473K16
C 133		CKSQYB104K16
C 134		See Contrast table
C 135		See Contrast table
C 136		See Contrast table
C 137		See Contrast table
C 138		See Contrast table
C 139		CKSQYB104K16
C 140		CEJA100M16
C 141		CKSQYB104K16
C 142		See Contrast table
C 143		See Contrast table
C 201		See Contrast table
C 202		See Contrast table
C 203		See Contrast table
C 204		See Contrast table
C 205		See Contrast table
C 206		See Contrast table
C 207		See Contrast table
C 208		See Contrast table
C 209		See Contrast table
C 210		See Contrast table
C 211		See Contrast table
C 212		See Contrast table
C 213		See Contrast table

=====Circuit Symbol & No.	===Part Name	Part No.
C 214		See Contrast table
C 215		See Contrast table
C 216		See Contrast table
C 217		See Contrast table
C 218		See Contrast table
C 219		See Contrast table
C 220		See Contrast table
C 221		See Contrast table
C 222		CCSQCH101J50
C 223		CCSQCH101J50
C 224		CCSQCH101J50
C 225		CCSQCH101J50
C 226		CEJA2R2M50
C 227		CEJA2R2M50
C 228		CCSQCH101J50
C 229		CCSQCH101J50
C 251		CEJAR22M50
C 252		CEJAR22M50
C 253		CEJAR22M50
C 254		CEJAR22M50
C 255		CKSQYB104K16
C 256	4700µF/16V	CCH1178
C 257		CEJA1R0M50
C 258		CEJA220M16
C 301		CEJA1R0M50
C 302		CEJA1R0M50
C 303		CEJA1R0M50
C 304		CEJA1R0M50
C 305		CEJA100M16
C 306		CEJA100M16
C 307		CKSQYB104K16
C 308		CKSQYB102K50
C 401		CKSQYB223K25
C 402		CKSQYB223K25
C 403		CKSQYB223K25
C 404		CKSQYB273K25
C 405		CKSQYB223K25
C 406		CKSQYB223K25
C 407		CKSQYB223K25
C 408		CKSQYB471K50
C 409		CKSQYB473K16
C 410		CKSQYB102K50
C 411		CEJA220M10
C 412		CKSQYB103K25
C 414		CKSQYB103K25
C 415		CEJA220M6R3
C 416		CEJA220M6R3
C 417		CKSQYB103K25
C 418		CKSQYB103K25
C 419	4.7µF/16V	CCH1250
C 420		CKSQYB103K25
C 421		CKLSR473K16
C 422		CKSQYB332K50
C 423		CKSQYB103K25
C 424		CKSQYB103K25
C 425	4.7µF/16V	CCH1250
C 426		CEJAR47M50
C 427		CCSQCH150J50
C 428		CCSQCH150J50
C 429		CCSQCH101J50
C 431		CKSQYB103K25
C 432		CKSQYB103K25
C 433		CEJA220M6R3
C 434		CKSQYB102K50
C 435		CKSQYB103K25

=====Circuit Symbol & No.	===Part Name	Part No.
C 436		CKSRYB103K25
C 437		CKSRYB223K25
C 501		CKSQYB104K16
C 502		CKSRYB223K25
C 503		CKSQYB103K25
C 504		CKSQYB103K25
C 505		CEJA4R7M35
C 506		CKSQYB103K25
C 507		CKSQYB104K16
C 508		CKSQYB222K50
C 509		CKSQYB104K16
C 510		CKSYB105K16
C 511		CKSQYB104K16
C 512		CKSQYB472K50
C 513		CEJA4R7M35
C 514		CKSQYB104K16
C 515		CKSRYB223K25
C 516		CEJA1R0M50
C 517		CEJA1R0M50
C 553		CCSQCH220J50
C 554		CCSQCH220J50
C 601		CEJA330M10
C 602		CEJA1R0M50
C 603		CEAS331M16
C 604	1500µF/16V	CCH1201
C 605		CKSQYB103K25
C 606		CEJA470M10
C 607		CKSYB105K16
C 608		CKSQYB473K16
C 609		CKSQYB473K16
C 613		CKSQYB103K25
C 614		CKSQYB103K25
C 615		CKSQYB103K25
C 616		CEJA1R0M50
C 617		CKSQYB102K50
C 618		CKSQYB102K50
C 619		CEAS470M10
C 620	330µF/10V	CCH1181
C 621		CEAS101M10
C 622		CEAS470M10
C 623		CCSQCH180J50
C 624		CCSQCH180J50
C 626		CCSQCH101J50
C 628		CCSQCH101J50
C 630		CKSQYB102K50
C 631		CEJA2R2M50
C 632		CKSQYB473K16
C 634		CKSQYB473K16
C 650		CEJA4R7M35
C 671		CKSQYB103K25
C 672		CEAS471M10
C 673		CKSQYB104K16
C 674		CCSQCH101J50
C 677		CCSQCH101J50
C 679		CCSQCH101K50
C 702		CCSQCH101J50
C 751		CEJA100M16
C 752		CEJA100M16
C 753		CKSQYB103K25

CONTRAST TABLE of TUNER AMP UNIT

KEH-P8600R/EW and KEH-P7600R/EW have the same construction except for the following:

Symbol & Description	Part No. KEH-P8600R/EW	Part No. KEH-P7600R/EW
Spectrum Analyzer Main Unit	CWM5339	Not used
IC 201,202,203,204 IC	NJM4558MD	Not used
Q 201,202 Transistor	2SC2412K	Not used
Q 203,204 Transistor	2SC2412K	Not used
L 201,202 Inductor	LCTB2R2K2125	Not used
L 203,204 Inductor	LCTB2R2K2125	Not used
R 109 110	RS1/10S223J	Not used
R 201	RS1/10S220J	Not used
R 202,203,204,205	RS1/10S333J	Not used
R 206,207,208,209	RS1/16S334J	Not used
R 210,211,212,213	RS1/16S103J	Not used
R 214,215,216,217	RS1/16S472J	Not used
R 218,219,220,221	RS1/16S472J	Not used
R 222,223,224,225	RS1/16S183J	Not used
R 226,227,228,229	RS1/16S184J	Not used
R 230,231,232,233	RS1/16S393J	Not used
R 242,243,244,245	Not used	RS1/10S0R0J
R 648,694	RS1/16S473J	Not used
R 649	Not used	RS1/16S473J
R 690,691,692	RS1/10S102J	Not used
C 134,135,136,137	CEJA4R7M35	CEJA100M16
C 142,143	CEJA1R0M50	Not used
C 201	CEJA101M10	Not used
C 202,203,204,205	CEWAR100M16	Not used
C 206,207,208,209	CCSRCH101J50	Not used
C 210,211,212,213	CKSRYB103K25	Not used
C 214,215,216,217	CEJA4R7M35	Not used
C 218,219,220,221	CEJA1R0M50	Not used

G Unit Number : CWM5339 (KEH-P8600R/EW)
Unit Name : Spectrum Analyzer Main Unit

MISCELLANEOUS

IC	152	IC	NJM4558MD
IC	153	IC	NJM4558MD
IC	154	IC	NJM4558MD
IC	155	IC	NJM4558MD
IC	156	IC	NJM4558MD
IC	157	IC	TC4051BF
D	151	Diode	MA110
D	152	Diode	MA110
D	153	Diode	MA110
D	154	Diode	MA110
D	155	Diode	MA110
D	156	Diode	MA110
D	157	Diode	MA110
D	158	Diode	MA110
D	159	Diode	MA110
D	160	Diode	MA110
S	751	Slide Switch	CSH1046

RESISTORS

R	154	RS1/10S473J
R	156	RS1/10S102J
R	157	RS1/10S102J
R	162	RS1/10S473J
R	163	RS1/10S224J
R	164	RS1/10S272J
R	165	RS1/10S623J
R	166	RS1/10S184J
R	167	RS1/10S433J
R	168	RS1/10S182J
R	169	RS1/10S154J
R	170	RS1/10S152J
R	171	RS1/10S363J
R	172	RS1/10S114J
R	173	RS1/10S273J
R	174	RS1/10S112J
R	175	RS1/10S164J
R	176	RS1/10S162J
R	177	RS1/10S393J
R	178	RS1/10S134J
R	179	RS1/10S333J
R	180	RS1/10S132J
R	181	RS1/10S124J
R	182	RS1/10S122J
R	183	RS1/10S303J
R	184	RS1/10S225J
R	185	RS1/10S225J
R	186	RS1/10S225J
R	187	RS1/10S225J
R	188	RS1/10S225J
R	189	RS1/10S225J
R	190	RS1/10S225J
R	191	RS1/10S123J
R	192	RS1/10S222J
R	193	RS1/10S512J
R	194	RS1/10S474J
R	195	RS1/10S124J
R	196	RS1/10S225J

CAPACITORS

C	151	CEJA100M16
C	159	CEJA100M16
C	160	CEJA470M10
C	161	CKSQYB103K25
C	163	CKSQYB104K25
C	164	CKSQYB104K25
C	165	CKSQYB104K25
C	166	CKSQYB104K25
C	167	CKSQYB104K25
C	168	CKSQYB104K25
C	169	CKSQYB104K25
C	170	CKSQYB823K25
C	171	CKSQYB823K25
C	172	CKSQYB473K25
C	173	CKSQYB473K25
C	174	CKSQYB223K25
C	175	CKSQYB223K25
C	176	CKSQYB123K25
C	177	CKSQYB123K25
C	178	CKSQYB332K50
C	179	CKSQYB332K50
C	180	CKSQYB152K50
C	181	CKSQYB152K50
C	182	CKSQYB821K50
C	183	CKSQYB821K50
C	184	CKSQYB391K50
C	185	CKSQYB823K25
C	186	CKSQYB823K25
C	187	CKSQYB104K25
C	188	CCSQSL101J50

=====Circuit Symbol & No.	===Part Name	Part No.
C Unit Number : EWM1008		
Unit Name : Deck Unit (KEH-P8600R/EW)		
MISCELLANEOUS		
IC 251	IC	HA12173-01
IC 351	IC	PA2020A
Q 271	Transistor	2SC4116
Q 351	Transistor	2SB1260
Q 352	Transistor	2SC4102
D 351	Diode	MA141K
VR 301	Semi-fixed 33kΩ(B)	CCP1130
VR 302	Semi-fixed 33kΩ(B)	CCP1130
RESISTORS		
R 255		RS1/16S181J
R 256		RS1/16S181J
R 257		RS1/16S183J
R 258		RS1/16S183J
R 259		RS1/16S133J
R 260		RS1/16S133J
R 261		RS1/16S274J
R 262		RS1/16S274J
R 271		RS1/16S183J
R 272		RS1/8S223J
R 273		RS1/8S223J
R 274		RS1/8S103J
R 275		RS1/16S473J
R 276		RS1/16S104J
R 277		RS1/16S224J
R 278		RS1/16S104J
R 281		RS1/8S0R0J
R 282		RS1/8S0R0J
R 283		RS1/8S0R0J
R 284		RS1/8S0R0J
R 285		RS1/16S0R0J
R 286		RS1/16S0R0J
R 287		RS1/16S0R0J
R 288		RS1/16S0R0J
R 289		RS1/16S0R0J
R 290		RS1/8S0R0J
R 301		RS1/16S223J
R 302		RS1/16S223J
R 303		RS1/16S561J
R 304		RS1/16S561J
R 321		RS1/8S223J
R 322		RS1/8S223J
R 351		RS1/16S102J
R 352		RS1/16S102J
R 353		RS1/16S102J
R 354		RS1/16S102J
R 355		RS1/10S274J
R 356		RS1/10S202J
R 357		RS1/10S472J
R 358		RS1/10S103J
R 359		RS1/10S103J
R 360		RS1/10S102J
R 361		RS1/10S622J
R 373		RS1/8S0R0J
R 374		RS1/8S0R0J
R 375		RS1/8S0R0J
R 401		RS1/16S273J
R 402		RS1/16S223J
R 403		RS1/16S274J
R 404		RS1/16S823J
R 405		RS1/16S274J

=====Circuit Symbol & No.	===Part Name	Part No.
CAPACITORS		
C 251		CKSRYB391K50
C 252		CKSRYB391K50
C 253		CKSRYB391K50
C 254		CKSRYB391K50
C 255		CKSRYB103K25
C 256		CKSRYB103K25
C 271		CEV1R0M50
C 272		CKSQYB104K16
C 301		CKSYB474K16
C 302		CKSYB474K16
C 303		CKSRYB222K50
C 304		CKSRYB222K50
C 305		CKSRYB222K50
C 306		CKSRYB222K50
C 307		CKSRYB222K50
C 308		CKSRYB222K50
C 309		CKSQYB104K16
C 310		CKSQYB104K16
C 311		CKSQYB104K16
C 312		CKSQYB104K16
C 322		CEV100M16
C 351		CKSYB224K25
C 352		CKSQYB392K50
C 353		CKSQYB103K50
C 354		CKSQYB103K50
C 355		CKSYB104K50
C 356		CKSQYB103K50
C 401		CKSRYB182K50
C 402		CKSRYB822K25
C 403		CKSRYB333K16
C 404		CKSRYB471K50
C Unit Number : EWM1007		
Unit Name : Deck Unit (KEH-P7600R/EW)		
MISCELLANEOUS		
IC 251	IC	HA12163
IC 351	IC	PA2020A
Q 271	Transistor	2SC4116
Q 351	Transistor	2SB1260
Q 352	Transistor	2SC4102
D 351	Diode	MA141K
VR 301	Semi-fixed 33kΩ(B)	CCP1130
VR 302	Semi-fixed 33kΩ(B)	CCP1130
RESISTORS		
R 255		RS1/16S181J
R 256		RS1/16S181J
R 257		RS1/16S183J
R 258		RS1/16S183J
R 259		RS1/16S133J
R 260		RS1/16S133J
R 261		RS1/16S274J
R 262		RS1/16S274J
R 271		RS1/16S183J
R 272		RS1/8S223J
R 273		RS1/8S223J
R 274		RS1/8S103J
R 275		RS1/16S473J
R 276		RS1/16S104J
R 277		RS1/16S224J
R 278		RS1/16S104J
R 281		RS1/8S0R0J
R 282		RS1/8S0R0J
R 283		RS1/8S0R0J
R 284		RS1/8S0R0J

=====Circuit Symbol & No.	===Part Name	Part No.
R 285		RS1/16S0R0J
R 286		RS1/16S0R0J
R 288		RS1/16S0R0J
R 289		RS1/16S0R0J
R 322		RS1/8S223J
R 351		RS1/16S102J
R 352		RS1/16S102J
R 353		RS1/16S102J
R 354		RS1/16S102J
R 355		RS1/10S274J
R 356		RS1/10S202J
R 357		RS1/10S472J
R 358		RS1/10S103J
R 359		RS1/10S103J
R 360		RS1/10S102J
R 361		RS1/10S622J
R 373		RS1/8S0R0J
R 374		RS1/8S0R0J
R 375		RS1/8S0R0J
R 401		RS1/16S273J
R 402		RS1/16S223J
R 403		RS1/16S274J
R 404		RS1/16S823J
R 405		RS1/16S274J
CAPACITORS		
C 251		CKSRYB391K50
C 252		CKSRYB391K50
C 253		CKSRYB391K50
C 254		CKSRYB391K50
C 255		CKSRYB103K25
C 256		CKSRYB103K25
C 271		CEV1R0M50
C 272		CKSQYB104K16
C 301		CKSYB474K16
C 302		CKSYB474K16
C 309		CKSQYB104K16
C 310		CKSQYB104K16
C 351		CKSYB224K25
C 352		CKSQYB392K50
C 353		CKSQYB103K50
C 354		CKSQYB103K50
C 355		CKSYB104K50
C 356		CKSQYB103K50
C 401		CKSRYB182K50
C 402		CKSRYB822K50
C 403		CKSRYB333K16
C 404		CKSRYB471K50

Keyboard Unit
Consisits of ·Keyboard PCB ·Switch PCB

D H Unit Number : CWM5062
Unit Name : Keyboard Unit (KEH-P8600R/EW)

MISCELLANEOUS

IC	1901	HIC	RS-140
IC	1902	IC	PD6199A
IC	1903	IC	PD6200A
IC	1904	IC	SC14SU69F
Q	1901	Transistor	2SC2712
Q	1902	Transistor	IMH10A
Q	1903	Transistor	DTC143TK
Q	1904	Transistor	IMH10A
Q	1905	Transistor	IMH10A
Q	1906	Transistor	IMH10A

=====Circuit Symbol & No.	===Part Name	Part No.
Q 1907	Transistor	IMH10A
D 1901	Diode	MA153
D 1902	Diode	MA153
D 1903	LED	CL155DPGD
D 1904	LED	CL155DPGD
D 1905	LED	CL170DCD
D 1906	LED	CL170DCD
D 1907	LED	CL170PGCD
D 1909	LED	CL170DCD
D 1910	LED	CL170DCD
D 1911	LED	CL170DCD
D 1912	LED	CL170DCD
D 1913	LED	CL170DCD
D 1914	LED	CL170DCD
D 1915	LED	CL170DCD
D 1916	LED	CL170DCD
D 1917	LED	CL170DCD
D 1918	LED	CL170DCD
D 1919	LED	CL170DCD
L 1901	Inductor	LCTB2R2K2125
L 1902	Inductor	LCTB2R2K2125
X 1901	Resonator 5.0000MHz	CSS1405
S 1901	Switch	CSG1043
S 1902	Push Switch	CSG1099
S 1903	Push Switch	CSG1085
S 1904	Push Switch	CSG1099
S 1905	Push Switch	CSG1099
S 1906	Switch	CSG1043
S 1908	Push Switch	CSG1099
S 1910	Push Switch	CSG1085
S 1911	Push Switch	CSG1099
S 1912	Push Switch	CSG1078
S 1913	Push Switch	CSG1084
S 1914	Push Switch	CSG1085
S 1915	Push Switch	CSG1084
S 1917	Push Switch	CSG1085
S 1918	Push Switch	CSG1084
S 1919	Push Switch	CSG1085
S 1920	Push Switch	CSG1084
S 1921	Push Switch	CSG1085
S 1922	Push Switch	CSG1085
S 1923	Push Switch	CSG1085
S 1924	Push Switch	CSG1084
S 1930	Switch	CSN1027
CN 1902	EL	CEL1493
LCD1901	LCD	CAW1403
RESISTORS		
R 1901		RS1/8S222J
R 1902		RS1/8S222J
R 1903		RS1/10S272J
R 1904		RS1/10S121J
R 1905		RS1/10S102J
R 1906		RS1/10S103J
R 1907		RS1/10S470J
R 1908		RS1/10S470J
R 1909		RS1/10S470J
R 1910		RS1/10S470J
R 1911		RS1/4S561J
R 1912		RS1/4S561J
R 1913		RS1/10S151J
R 1915		RS1/8S271J
R 1917		RS1/8S271J
R 1919		RS1/10S151J
R 1921		RS1/10S151J
R 1923		RS1/10S151J
R 1925		RS1/10S151J
R 1927		RS1/8S271J

=====Circuit Symbol & No.	===	Part Name	Part No.
R	1929		RS1/8S151J
R	1931		RS1/10S102J
R	1936		RS1/10S103J
R	1941		RS1/10S470J
R	1942		RS1/10S470J
CAPACITORS			
C	1901		CSZS100M6R3
C	1902		CSZS100M6R3
C	1903		CKSQYB103K50
C	1904		CKSQYB103K50
C	1905		CKSQYB103K50
C	1906		CKSQYB103K50
C	1907		CKSQYB103K50
C	1908		CKSQYB103K50
C	1909		CKSQYB103K50
C	1910		CKSQYB103K50
C	1911		CKSQYB103K50
C	1912		CCSQCH220J50
C	1913		CCSQCH220J50

Keyboard Unit
Consisits of
·Keyboard PCB ·Switch PCB

D H Unit Number : CWM5416
Unit Name : Keyboard Unit (KEH-P7600R/EW)

MISCELLANEOUS

IC	1901	HIC	RS-140
IC	1902	IC	PD6199A
Q	1901	Transistor	2SC2712
Q	1902	Transistor	IMH10A
Q	1903	Transistor	DTC143TK
Q	1904	Transistor	IMH10A
Q	1905	Transistor	IMH10A
Q	1906	Transistor	IMH10A
Q	1907	Transistor	IMH10A
D	1901	Diode	MA153
D	1902	Diode	MA153
D	1903	LED	CL155DPGD
D	1904	LED	CL155DPGD
D	1905	LED	CL170DCD
D	1906	LED	CL170DCD
D	1907	LED	CL170PGCD
D	1909	LED	CL170DCD
D	1910	LED	CL170DCD
D	1911	LED	CL170DCD
D	1912	LED	CL170DCD
D	1913	LED	CL170DCD
D	1914	LED	CL170DCD
D	1915	LED	CL170DCD
D	1916	LED	CL170DCD
D	1917	LED	CL170DCD
D	1918	LED	CL170DCD
D	1919	LED	CL170DCD
L	1901	Inductor	LCTB2R2K2125
X	1901	Resonator 5.0000MHz	CSS1405
S	1901	Switch	CSG1043
S	1902	Push Switch	CSG1099
S	1903	Push Switch	CSG1085
S	1904	Push Switch	CSG1099
S	1905	Push Switch	CSG1099
S	1906	Switch	CSG1043
S	1908	Push Switch	CSG1099
S	1910	Push Switch	CSG1085
S	1911	Push Switch	CSG1099
S	1912	Push Switch	CSG1078
S	1913	Push Switch	CSG1084

=====Circuit Symbol & No.	===	Part Name	Part No.
S	1914	Push Switch	CSG1085
S	1915	Push Switch	CSG1084
S	1917	Push Switch	CSG1085
S	1918	Push Switch	CSG1084
S	1919	Push Switch	CSG1085
S	1920	Push Switch	CSG1084
S	1921	Push Switch	CSG1085
S	1922	Push Switch	CSG1085
S	1923	Push Switch	CSG1085
S	1924	Push Switch	CSG1084
S	1930	Switch	CSN1027
CN	1902	EL	CEL1493
LCD	1901	LCD	CAW1404
RESISTORS			
R	1901		RS1/8S222J
R	1902		RS1/8S222J
R	1903		RS1/10S272J
R	1904		RS1/10S121J
R	1905		RS1/8S102J
R	1906		RS1/10S103J
R	1907		RS1/10S470J
R	1908		RS1/10S470J
R	1909		RS1/10S470J
R	1910		RS1/10S470J
R	1911		RS1/4S561J
R	1912		RS1/4S561J
R	1913		RS1/10S151J
R	1915		RS1/8S271J
R	1917		RS1/8S271J
R	1919		RS1/10S151J
R	1921		RS1/10S151J
R	1923		RS1/10S151J
R	1925		RS1/10S151J
R	1927		RS1/8S271J
R	1929		RS1/8S151J
R	1936		RS1/10S103J
R	1940		RS1/10S0R0J
R	1941		RS1/10S470J
R	1942		RS1/10S470J
CAPACITORS			
C	1901		CSZS100M6R3
C	1902		CSZS100M6R3
C	1903		CKSQYB103K50
C	1904		CKSQYB103K50
C	1905		CKSQYB103K50
C	1906		CKSQYB103K50
C	1912		CCSQCH220J50
C	1913		CCSQCH220J50

E Unit Number :
Unit Name : PCB Unit

S	1	Switch (Load)	ESG1004
S	2	Switch (70µS)	ESG1004
EGN	1	Photo-Interrupter	EGN1005
R	1	Resistor	RD1/4PM181J

F Unit Number :
Unit Name : Reel PCB

EGN	2	Photo-Interrupter	EGN1006
EGN	3	Photo-Interrupter	EGN1006

Miscellaneous Parts List

M	1	Motor Unit (Main)	EXA1454
M	2	Motor Unit (Sub)	EXA1485
HD	1	Head Assy	EXA1452

6. ADJUSTMENT

● Connection Diagram

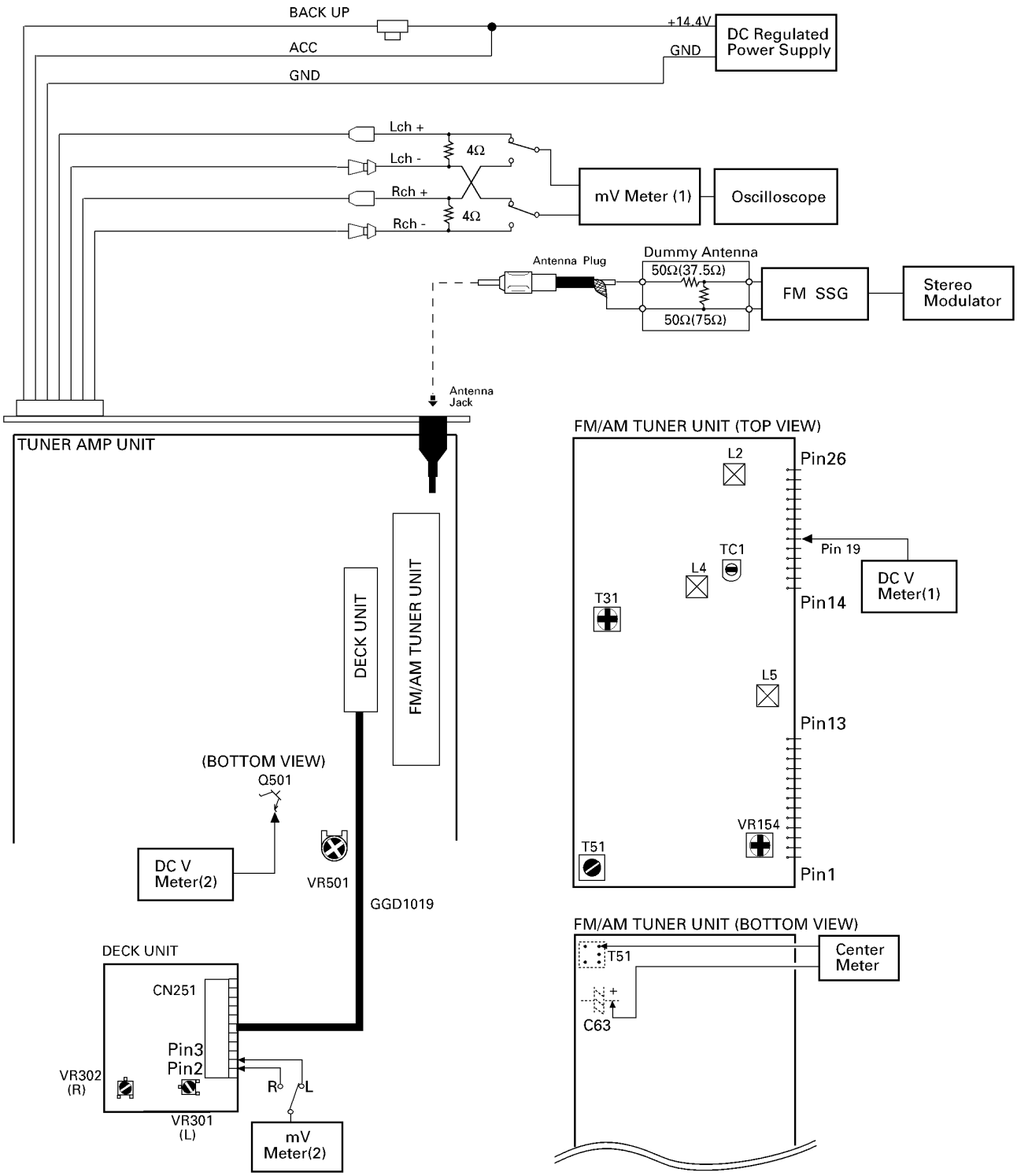


Fig. 27

FM ADJUSTMENT

Modulation M:MONO MOD., 400Hz 30%(22.5kHz Dev.) or 400Hz 100%(75kHz Dev.)
S1:STEREO MOD., 1kHz, L or R=30%(20.25kHz+7.5kHz Dev.)
S2:STEREO MOD., 400Hz, L or R=60%(40.50kHz+7.5kHz Dev.)

NOTE:Before proceeding to further adjustments after switching power ON, let the tuner run for ten minutes to allow the circuits to stabilize.

	No.	FM SSG		Displayed	Adjustment	Adjustment Method
		Frequency(MHz)	Level(dBf)	Frequency(MHz)	Point	(Switch Position)
TUN Volt	1	•••••	•••••	108.0	L5	DC V Meter(1) : 6V
IF	2	98.1 M	60	98.1	T51	Center Meter : 0
ANT Coil	3	98.1 M	5	98.1	L2	mV Meter(1) : Maximum
RF Coil	4	98.1 M	5	98.1	L4	mV Meter(1) : Maximum
Image	5	129.3 M	60—80	107.9	TC1	mV Meter(1) : Minimum
IFT	6	98.1 M	5	98.1	T31	mV Meter(1) : Maximum (STEREO MODE)
ARC	7	98.1 S1	40	98.1	VR154	mV Meter(1) : Separation 5dB (STEREO MODE)

RDS SL ADJUSTMENT

	No.	FM SSG		Displayed	Adjustment	Adjustment Method
		Frequency(MHz)	Level(dBf)	Frequency(MHz)	Point	(Switch Position)
	1	104.0 S2	35	104.0	VR501	DC V Meter(2) : 1.75V±0.05V

DOLBY B/C NR ADJUSTMENT(KEH-P8600R/EW)

No.	Test Tape	Adjustment Point	Adjustment Method (Switch Position)
1	NCT-150 (400Hz,200nwb/m)	VR301(Lch),VR302(Rch)	mV Meter(2) : – 8.24dBs+1.5dB, – 0.5dB (DOLBY NR Switch : OFF)

DOLBY B NR ADJUSTMENT(KEH-P7600R/EW)

No.	Test Tape	Adjustment Point	Adjustment Method (Switch Position)
1	NCT-150 (400Hz,200nwb/m)	VR301(Lch),VR302(Rch)	mV Meter(2) : –8.24dBs±1.0dB (DOLBY NR Switch : OFF)

● **For Repair of the Detach Grille Assy, Use the Extension-Cord Tool GGD1056.**

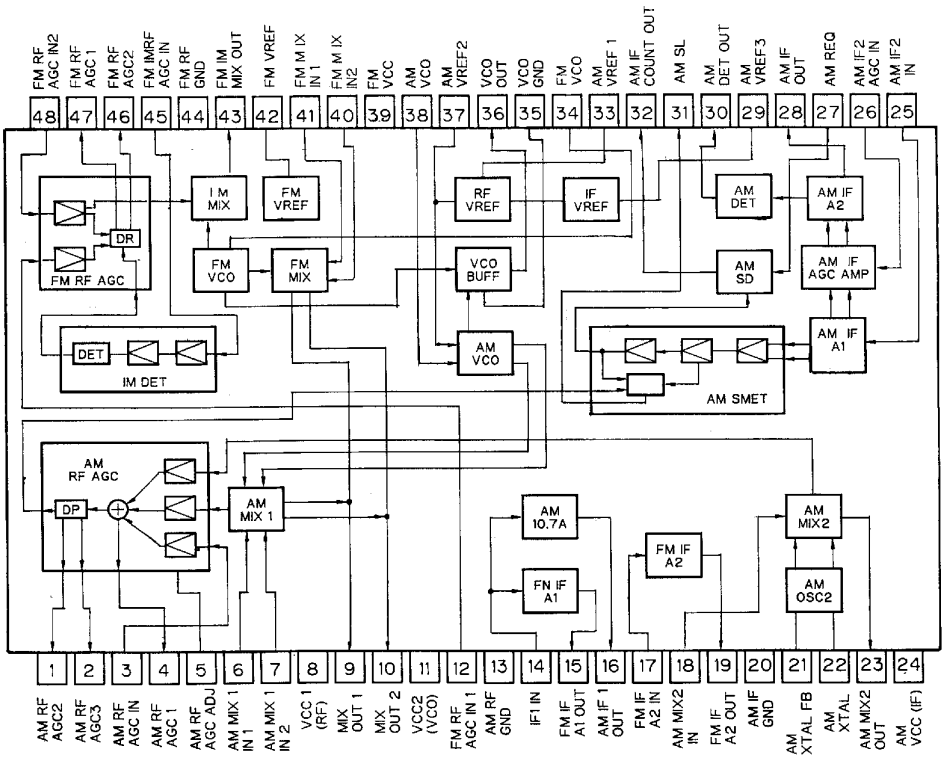
● **For Repair of the Cassette Mechanism Module, Use the Extension-Cord Tool GGD1121.**

7. GENERAL INFORMATION

7.1 PARTS

7.1.1 IC

PA4023B



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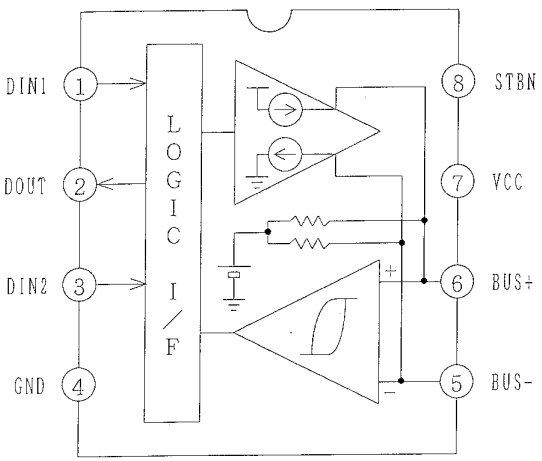

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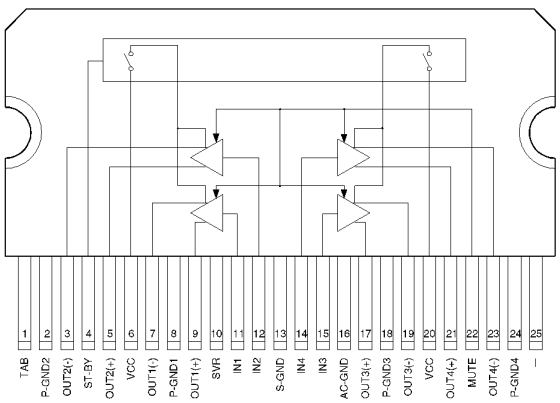

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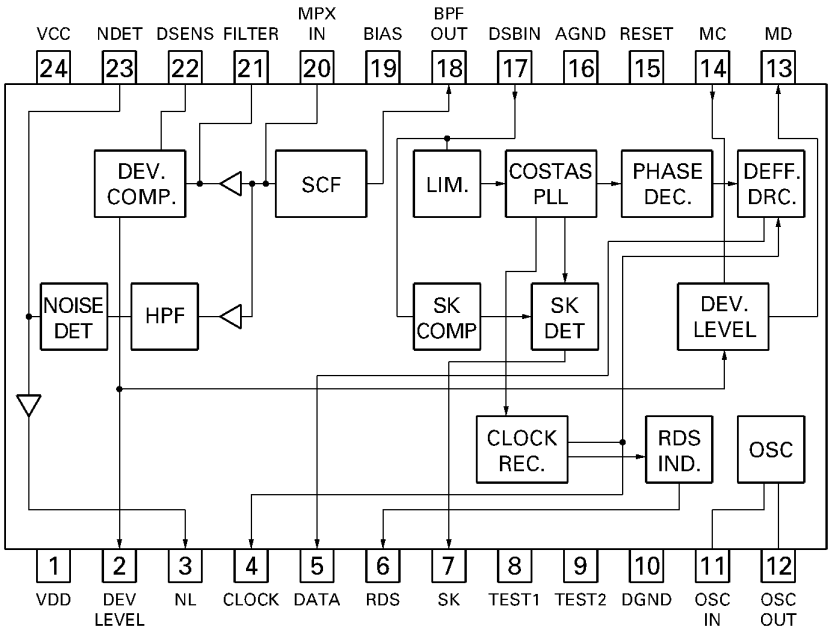
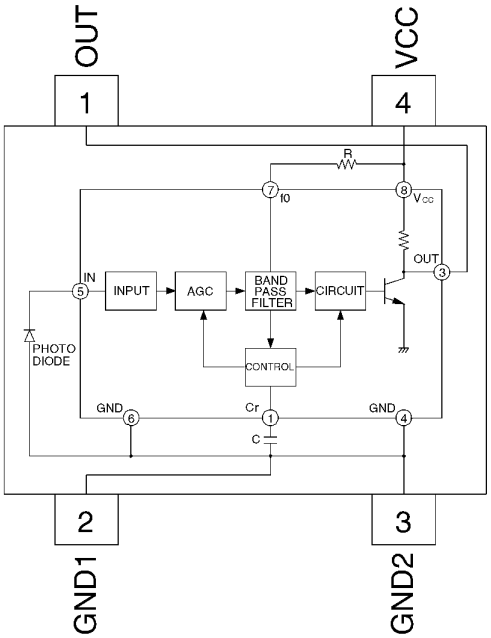
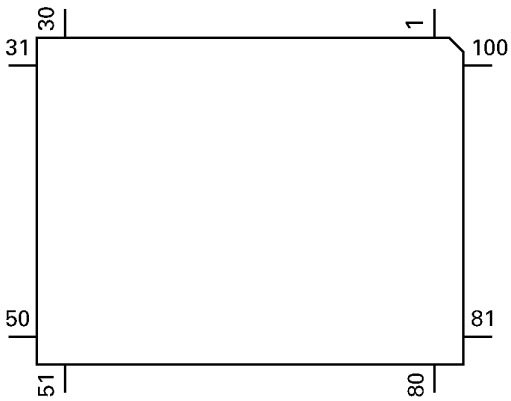


RS-140



IC's marked by are MOS type.*
Be careful in handling them because they are very liable to be damaged by electrostatic induction.

*PD4792A



● **Pin Functions (PD4792A)**

Pin No.	Pin Name	I/O	Function and Operation
1	$\overline{\text{SWVDD}}$	O	Keyboard unit power supply control output
2	$\overline{\text{DSENS}}$	I	Grille detach sense
3	$\overline{\text{CSENS}}$	I	Flap close sense input
4	$\overline{\text{ISENS}}$	I	Illumination sense input
5	TESTIN	I	Test program mode input
6	$\overline{\text{DRST}}$	O	Reset output
7	ERROR	O	Disapprove of error correction output
8	SK	I	SK signal input
9	RECIVE	O	Not used
10	$\overline{\text{L}}$/S	O	Not used
11	$\overline{\text{RESET}}$	I	Reset input
12	XT2		(open)
13	XT1	I	(VSS)
14	VSS		(GND)
15	X2		Crystal oscillator connection pin
16	X1	I	Crystal oscillator connection pin
17	REGC		(VDD)
18	REGOFF		(VDD)
19	VDD		Power supply
20	ILMPW	O	Illumination power supply control output
21	SYSPWR	O	System power control output
22	$\overline{\text{ADPW}}$	O	A/D converter power output
23	LCDPW	O	LCD back light power supply control output
24	IPPW	O	Power supply control output for IP BUS interface IC
25	ASENBO	O	Slave power supply control output
26	PRSBSW	I	PRE OUT/MAIN IN select input
27	TELIN	I	TEL mute signal input
28	MUTE	O	Mute output
29	DIM	O	Dimmer select output
30	SPMPX0	O	MPX output for spectrum analyzer 0
31	SPMPX1	O	MPX output for spectrum analyzer 1
32	SPMPX2	O	MPX output for spectrum analyzer 2
33	VCK	O	Clock output for electronic volume
34	VST	O	Strobe pulse output for electronic volume
35	VDT	O	Data output for electronic volume
36	$\overline{\text{TMUTE}}$	O	Tuner mute output
37	NC		Not used
38	SD	I	Station detector input
39	$\overline{\text{ST}}$	I	FM stereo input
40	VSS		GND
41	VDD		Power supply
42	$\overline{\text{MDSENS}}$	I	Modulation detect input
43	$\overline{\text{MUTCNT}}$	I	NF mute control input
44	$\overline{\text{RDSLK}}$	I	RDS LK signal input
45	$\overline{\text{CURRQ}}$	O	Tuner voltage FIX output
46	RDT	I	RDS demodulation data input
47	DRELAY	O	External relay output
48	DRSENS	I	Door open/close sense input
49	DRSYS	O	Door system select output
50	$\overline{\text{DLED}}$	O	Alarm LED output
51	DLSENS	I	Door lock sense input
52	STCUT	O	Starter cut off output
53	$\overline{\text{MOSENS}}$	I	Motion/window damage sensor input
54	MSIN	I	MS sense input
55	$\overline{\text{MTLSW}}$	I	Metal sense input
56	POS	I	Position sense input
57	RES	I	Cassette mechanism reverse end sense input

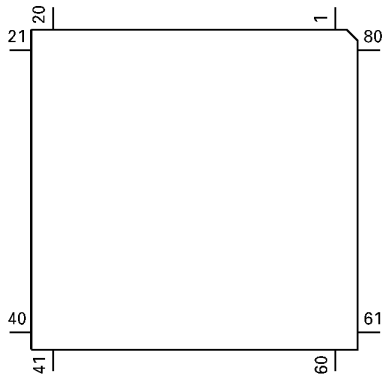
Pin No.	Pin Name	I/O	Function and Operation
58	NES	I	Cassette mechanism foward end sense input
59	DIRO	O	Head F/R select output
60	PLAY	O	MS gain select output
61	DLBYBC	O	Dolby B/C select output
62	PCL	O	Clock adjustment output
63	NR	O	NR output
64	SC2	O	Cassette mechanism sub motor control2 output
65	SC1	O	Cassette mechanism sub motor control1 output
66	CM	O	Cassette mechanism capstan motor control output
67	$\overline{\text{STBY}}$	O	Drive control output
68	LOADSW	I	Tape loading input
69–72	NC		Not used
73	TEST	I	Test terminal
74	SL	I	Signal level input
75	SEL	I	Select input for the destination
76	LEVEL	I	Level input for spectrum analyzer
77	CL	I	Synchronizing signal input of display data latch
78	NL	I	Noise level input
79–81	NC		Not used
82	AVDD		A/D converter analog power supply (VDD)
83	AVREF1		(VDD)
84	GND		GND
85	RX	I	IP BUS data input
86	TX	O	IP BUS data output
87	GND		GND
88	$\overline{\text{LDET}}$	I	PLL lock sense input
89	$\overline{\text{RCK}}$	I	RDS clock input
90	RDS57K	I	57kHzBP-OUT sense input
91	SEL0		Not used
92	$\overline{\text{ASENS}}$	I	ACC power sense input
93	$\overline{\text{BSENS}}$	I	Back up power sense input
94	TUNPDI	I	PLL IC data input
95	KEYDT	I	Display data input
96	DPDT	O	Display data output
97	TUNPCK	O	PLL IC clock
98	TUNPDO	O	PLL data output
99	TUNPCE	O	PLL IC chip enable
100	PEE	O	Beep tone output

● Pin Functions (PD6199A)

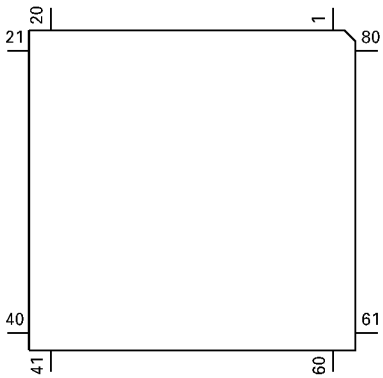
Pin No.	Pin Name	I/O	Format	Function and Operation
1	VSS			GND
2	XI	I		Crystal oscillator connection pin
3	XO	I		Crystal oscillator connection pin
4	$\overline{RST}$			Not used
5,6	MOD1,0	I		Model select input
7	LED	O	C	LED control output
8	SO	O	C	Key data output
9	SI	I		Serial data input
10	REM	I		Remote control reception
11	SDRQ	I		Reception error request input
12	ILM	O	C	Illumination color select output
13–16	KD4–KD1	I		Key sense input
17–22	KST6-1	O	N	Key strobe output
23	VCC			Power supply terminal
24–73	SEG49-0	O		LCD segment output
74–77	COM3–0	O		LCD common output
78–80	V3–V1			LCD Power supply terminal

Format	Meaning
C	C MOS
N	N channel open drain

*PD6199A



*PD6200A



● Pin Functions (PD6200A)

Pin No.	Pin Name	I/O	Function and Operation
1	VSS		GND
2	XI		Not used
3	XO	I	Crystal oscillator connection pin
4	$\overline{RST}$		Not used
5,6	MOD1,0	I	Model select input
7,8	NC		Not used
9	SI	I	Serial data input
10	NC		Not used
11	RVER	O	Reception error output
12–22	NC		Not used
23	VCC		Power supply terminal
24–59	SE49-14	O	LCD segment output
60–63	NC		Not used
64–73	SE9-0	O	LCD segment output
74–77	CO3–0	O	LCD common output
78–80	V3–V1		LCD Power supply terminal

7.1.2 DISPLAY

● CAW1403 (KEH-P8600R/EW)

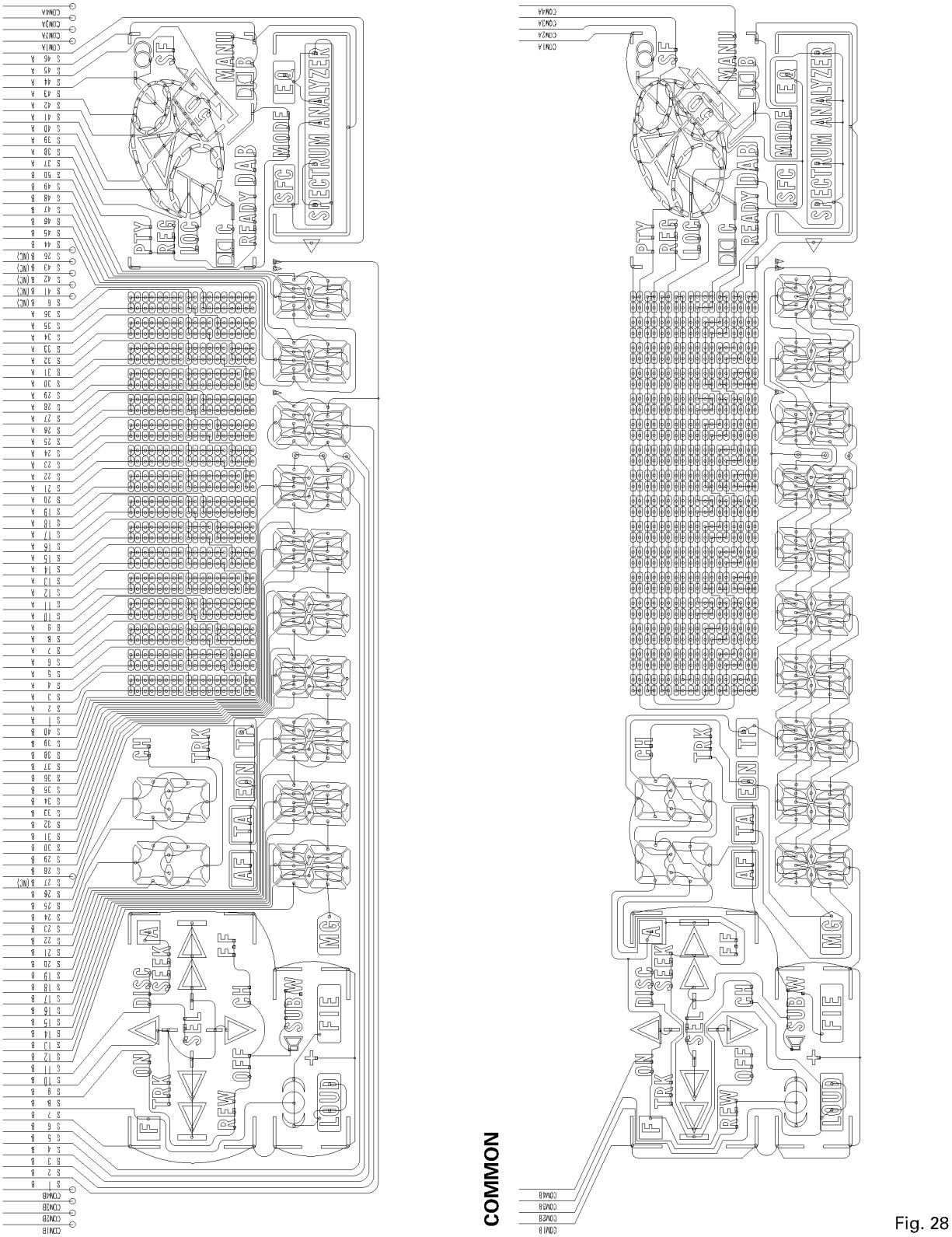


Fig. 28

● **CAW1404 (KEH-P7600R/EW)**

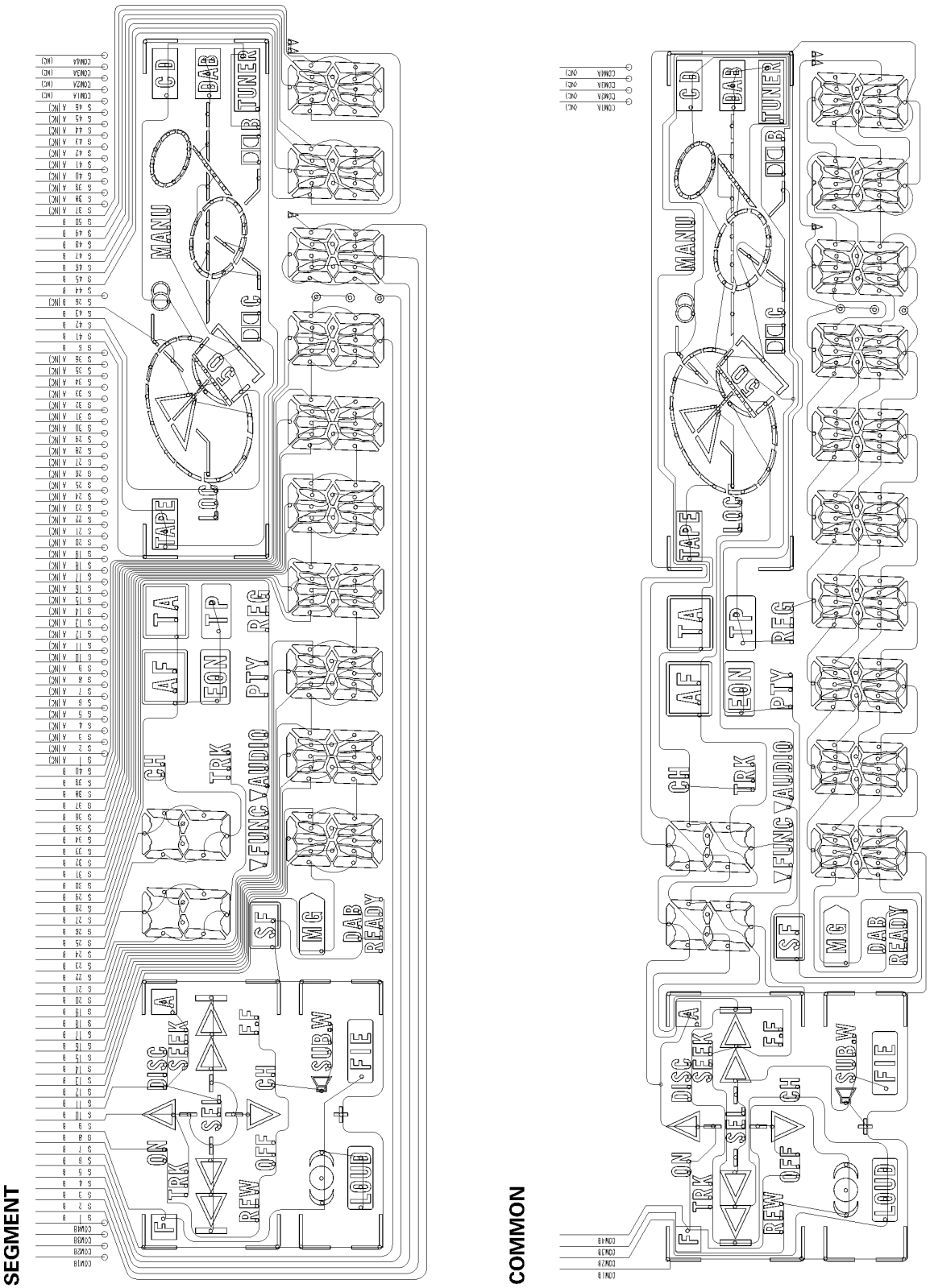


Fig. 29

7.2. DIAGNOSIS

7.2.1 DISASSEMBLY

● Removing the Case(not shown)

1. Remove the two screws.
2. Insert and turn a flat screwdriver to remove the case.

● Removing the Cassette Mechanism Module (not shown)

1. Remove the four screws.
2. Disconnect the connector.
3. Remove the Cassette Mechanism Module.

● Removing the Detach Grille Assy(Fig.30)

1. Press the OPEN button, and then pull Detach Grille Assy.

● Removing the Panel Assy(Fig.30)

1. Remove the two screws, and disconnect the two connectors.
2. Disengage the stoppers at two locations indicated by arrows.
3. Remove the Panel Assy.

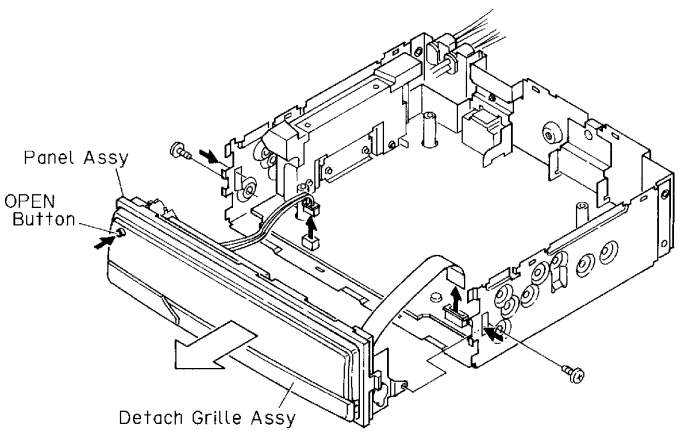


Fig. 30

● Removing the Tuner Amp Unit(Fig.31)

1. Remove the two screws A and three screws B.
2. Remove the one screw C.
3. Unbend the tabs at two locations indicated by arrows until straight.
4. Raise up on Tuner Amp Unit.

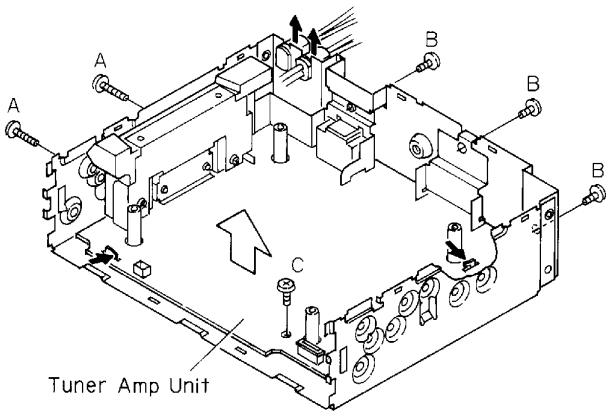


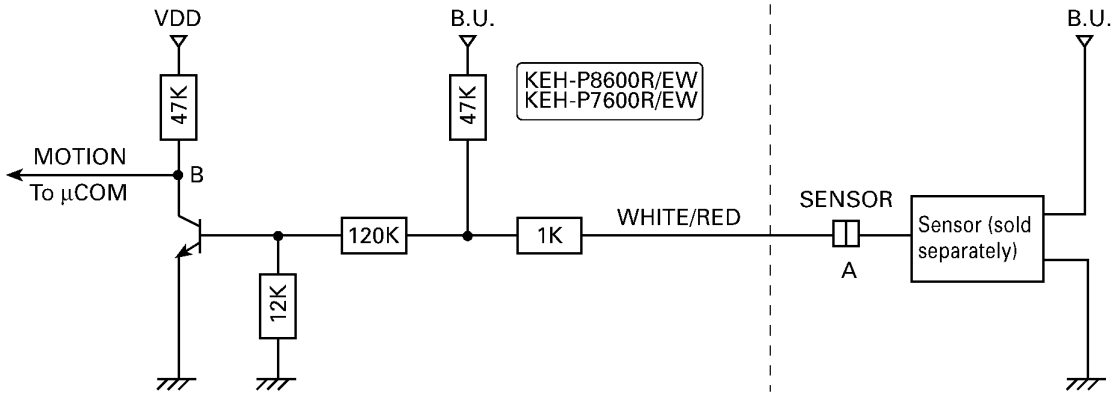
Fig. 31

7.3 EXPLANATION

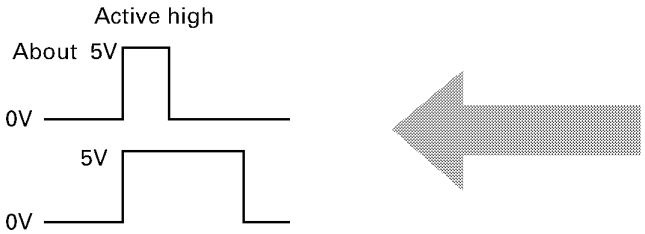
7.3.1 CIRCUIT DESCRIPTION

1) SENSOR

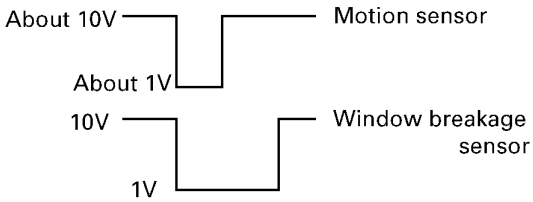
Install sensors sold separately, such as a motion sensor and window breakage sensor.



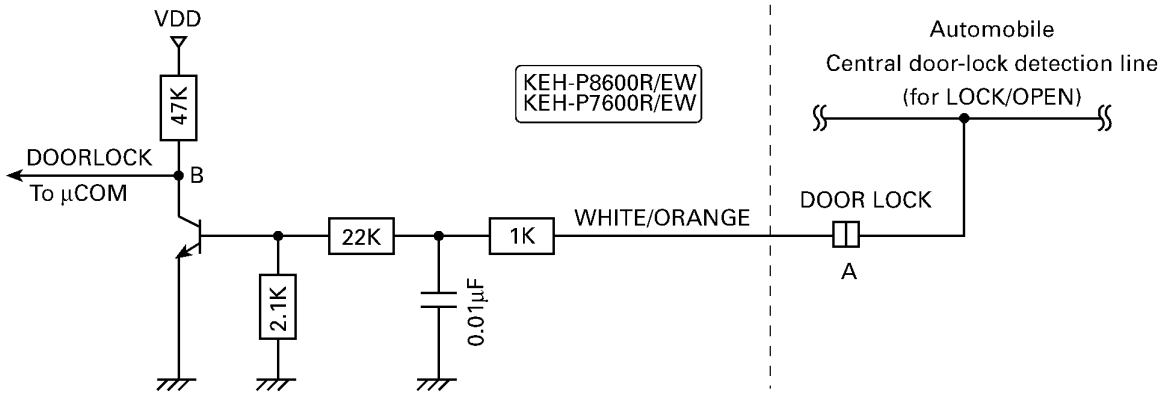
Point-B waveform (when a motion is sensed)

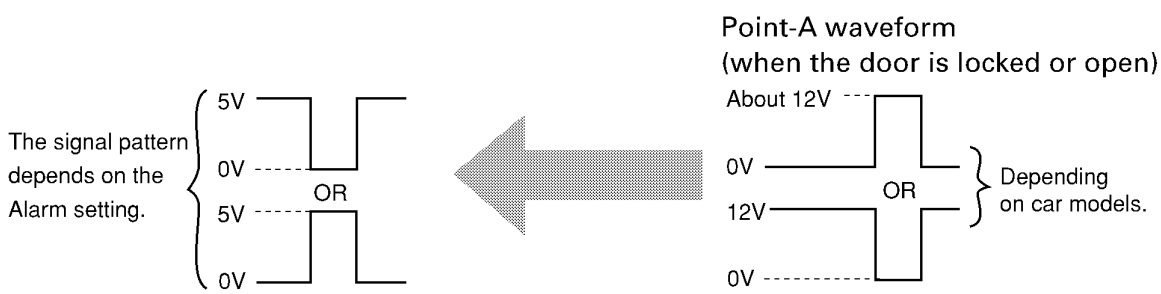


Point A waveform (when a motion is sensed)



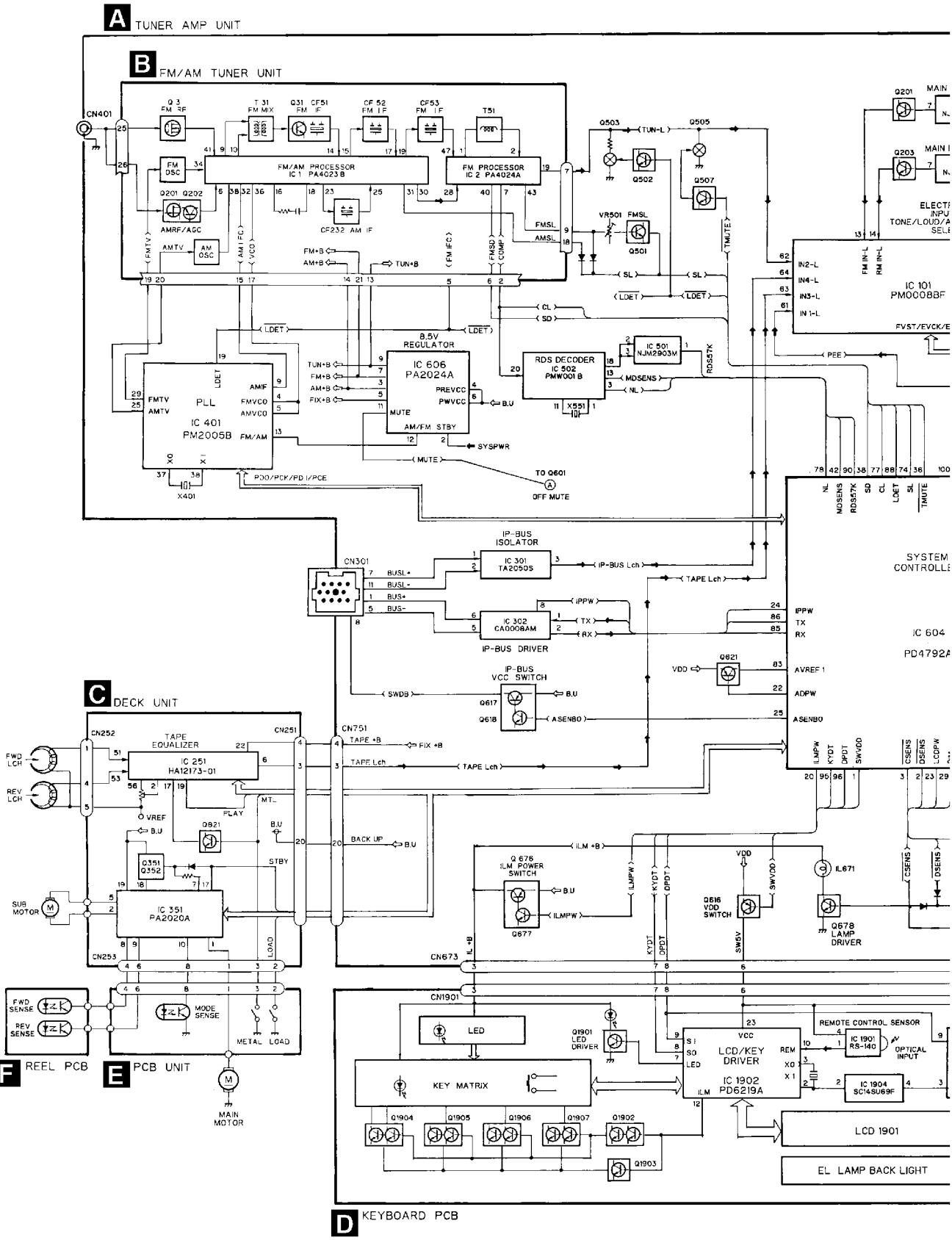
2) DOOR LOCK





7.3.2 BLOCK DIAGRAM

● KEH-P8600R/EW



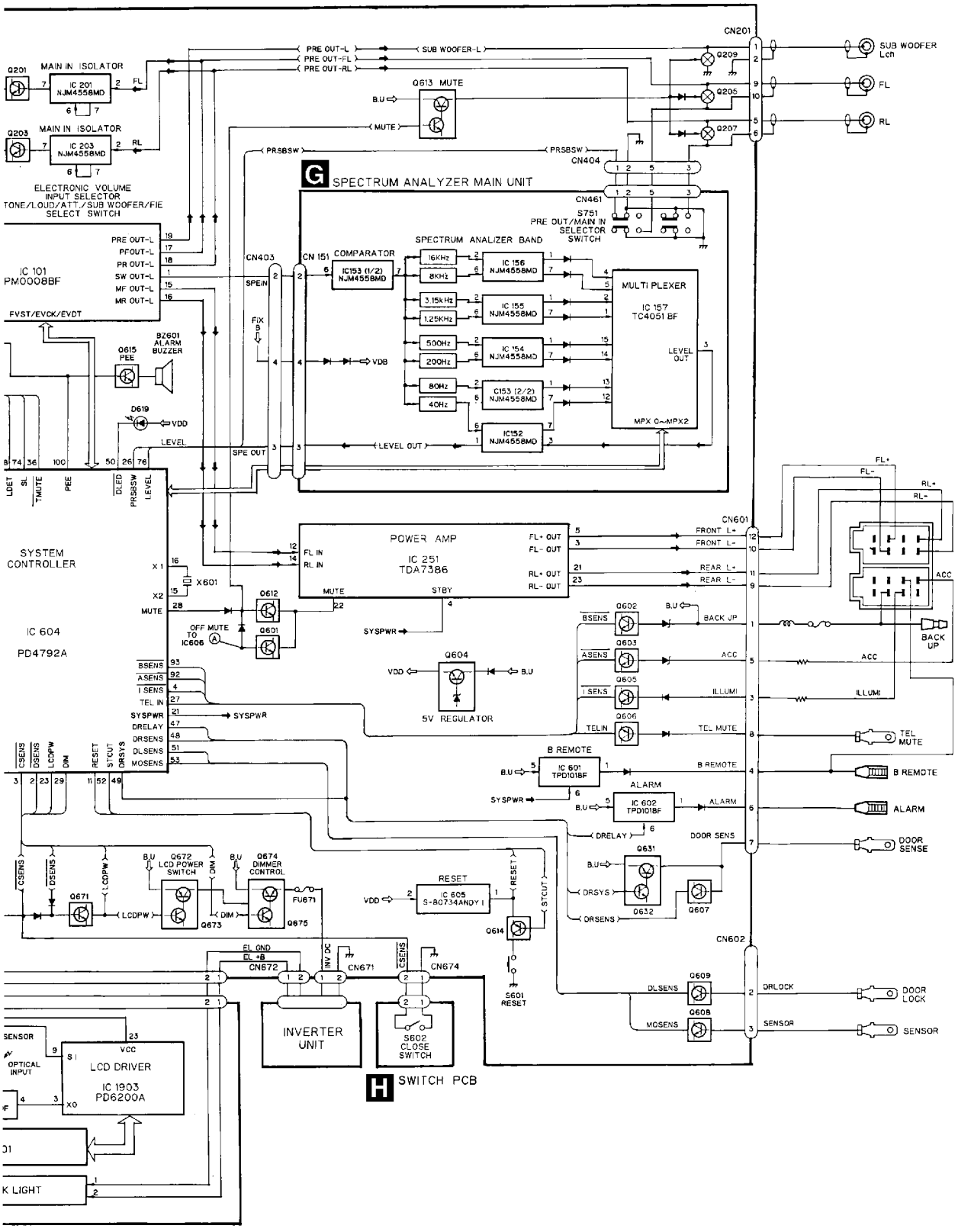

G SPECTRUM ANALYZER MAIN UNIT
H SWITCH PCB
SYSTEM CONTROLLER
IC 604
PD4792A
IC 101
PM0008BF
POWER AMP
IC 251
TDA7386
MULTI PLEXER
IC 157
TC4051 BF
COMPARATOR
SPECTRUM ANALIZER BAND
ELECTRONIC VOLUME
INPUT SELECTOR
TONE/LOUD/ATT./SUB WOOFER/FIE
SELECT SWITCH
MAIN IN ISOLATOR
Q613 MUTE
S751
PRE OUT/MAIN IN
SELECTOR
SWITCH
BZ601
ALARM
BUZZER
5V REGULATOR
B REMOTE
ALARM
DOOR SENS
LCD DRIVER
IC 1903
PD6209A
INVERTER
UNIT
S602
CLOSE
SWITCH
S601
RESET
SUB WOOFER
Lch
FL
RL
ACC
BACK
UP
TEL
MUTE
DOOR
SENSE
DOOR
LOCK
SENSOR

Fig. 32

8. OPERATIONS AND SPECIFICATIONS

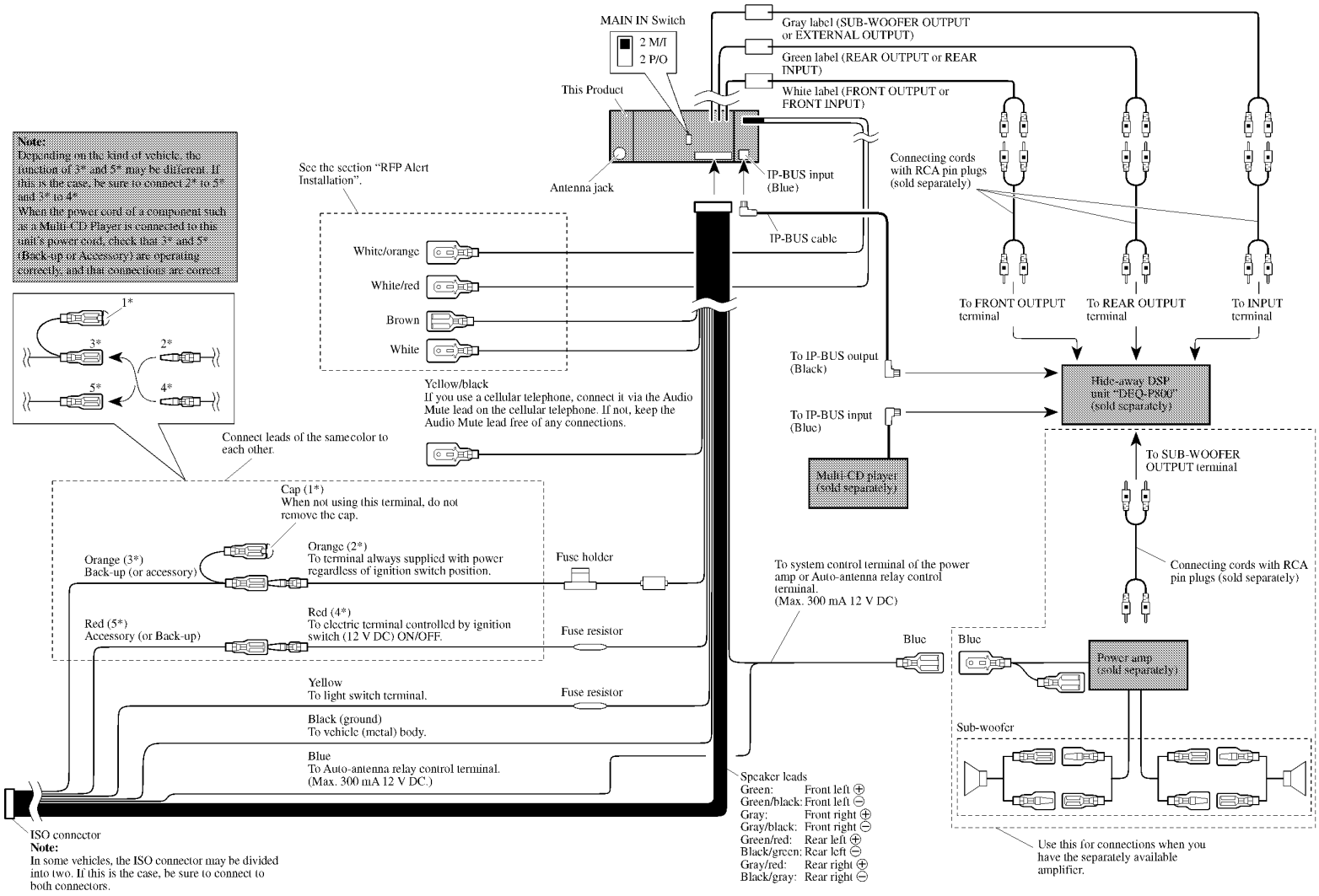

MAIN IN Switch
2 M/I
2 P/O
This Product
Antenna jack
Gray label (SUB-WOOFER OUTPUT or EXTERNAL OUTPUT)
Green label (REAR OUTPUT or REAR INPUT)
White label (FRONT OUTPUT or FRONT INPUT)
IP-BUS input (Blue)
IP-BUS cable
Connecting cords with RCA pin plugs (sold separately)
To FRONT OUTPUT terminal
To REAR OUTPUT terminal
To INPUT terminal
Note:
Depending on the kind of vehicle, the function of 3* and 5* may be different. If this is the case, be sure to connect 2* to 5* and 3* to 4*.
When the power cord of a component such as a Multi-CD Player is connected to this unit's power cord, check that 3* and 5* (Back-up or Accessory) are operating correctly, and that connections are correct.
See the section "RFP Alert Installation".
White/orange
White/red
Brown
White
1*
2*
3*
4*
5*
Connect leads of the same color to each other.
Yellow/black
If you use a cellular telephone, connect it via the Audio Mute lead on the cellular telephone. If not, keep the Audio Mute lead free of any connections.
To IP-BUS output (Black)
To IP-BUS input (Blue)
Hide-away DSP unit "DEQ-P800" (sold separately)
Multi-CD player (sold separately)
To SUB-WOOFER OUTPUT terminal
Connecting cords with RCA pin plugs (sold separately)
Cap (1*)
When not using this terminal, do not remove the cap.
Orange (3*)
Back-up (or accessory)
Orange (2*)
To terminal always supplied with power regardless of ignition switch position.
Fuse holder
To system control terminal of the power amp or Auto-antenna relay control terminal.
(Max. 300 mA 12 V DC)
Red (5*)
Accessory (or Back-up)
Red (4*)
To electric terminal controlled by ignition switch (12 V DC) ON/OFF.
Fuse resistor
Blue
Blue
Power amp (sold separately)
Yellow
To light switch terminal.
Fuse resistor
Sub-woofer
Black (ground)
To vehicle (metal) body.
Blue
To Auto-antenna relay control terminal.
(Max. 300 mA 12 V DC.)
Speaker leads
Green: Front left ⊕
Green/black: Front left ⊖
Gray: Front right ⊕
Gray/black: Front right ⊖
Green/red: Rear left ⊕
Black/green: Rear left ⊖
Gray/red: Rear right ⊕
Black/gray: Rear right ⊖
ISO connector
Note:
In some vehicles, the ISO connector may be divided into two. If this is the case, be sure to connect to both connectors.
Use this for connections when you have the separately available amplifier.

Fig. 33

Connecting the Units <ENGLISH>

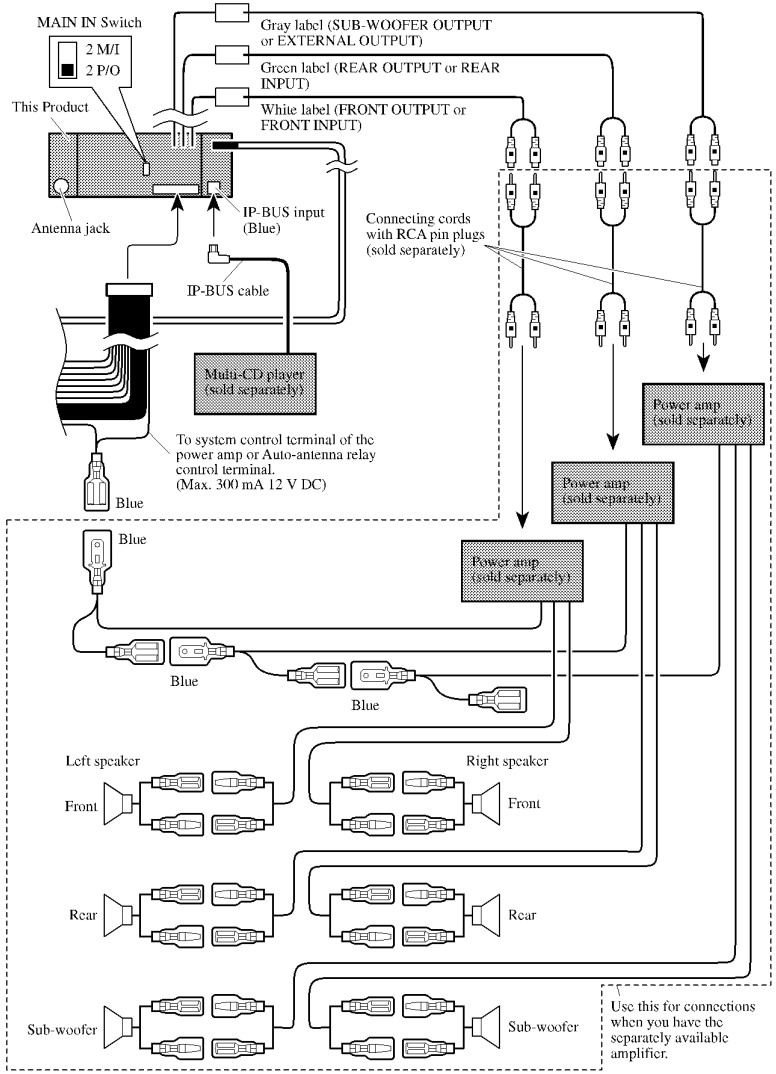
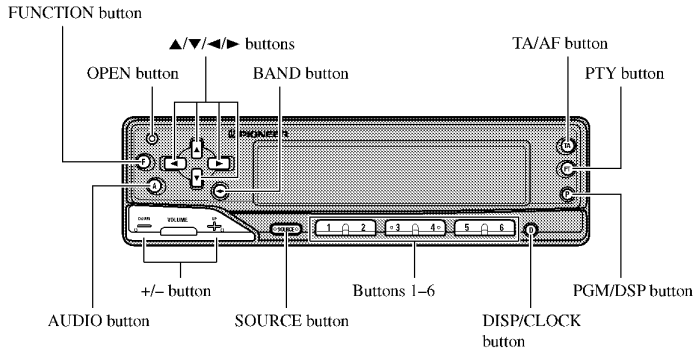


Fig. 34

Key Finder

■ Head Unit



■ Remote Controller

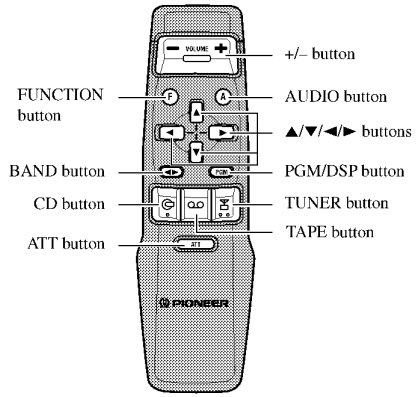
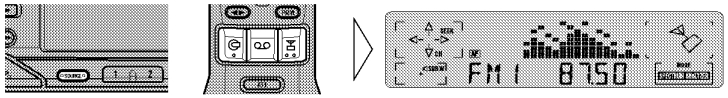


Fig. 35

Basic Operation

Switching Power ON/OFF

- **Select the desired source (such as the tuner).**



■ Head Unit

Each press of the SOURCE button selects the desired source in the following order:
Tuner → Tape → Multi-CD player → AUX

To switch the sources OFF, hold down the SOURCE button for 1 second or more.

■ Remote Controller

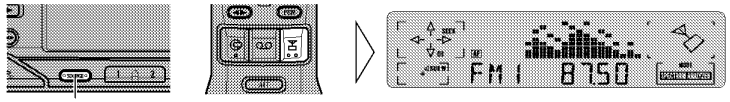
Each press of the button selects the desired source in the following order:
TUNER button : Tuner → OFF
TAPE button : Tape → OFF
CD button : Multi-CD player → OFF

Note:
- In the following cases, the sound source will not change:
  * No Multi-CD player is connected to this product.
  * No cassette tape is set in this product.
  * No magazine is set in the Multi-CD player.
  * AUX (external input) is set to OFF.

Tuner Operation

Basic Operation of Tuner

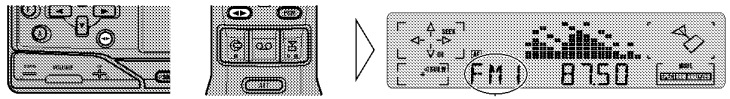
1. **Select Tuner.**



Each press
changes the Source ...

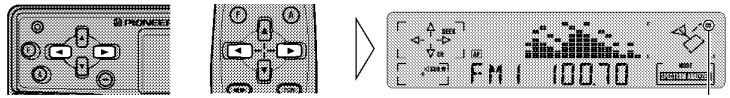
The program service name or frequency appears on the display.

2. **Select the desired band.**



FM1 → FM2 → FM3 → MW/LW

3. **Tune the receiver to a higher or lower frequency.**



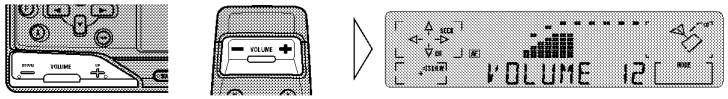
"◯"

This product's tuner lets you select the tuning by changing the length of the time you press the button.

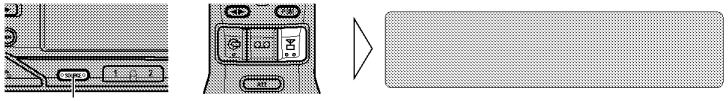
Manual Tuning (step by step)	0.3 seconds or less
Seek Tuning (automatically)	0.3 – 2 seconds
Manual Tuning (continuously)	2 seconds or more

Note:
- "◯" indicator lights when a stereo station is selected.
- To select a weak broadcasting station that cannot be tuned in with the Seek Tuning function, tune in with Manual Tuning.

4. **Raise or lower the volume.**



5. **Turn the source OFF.**

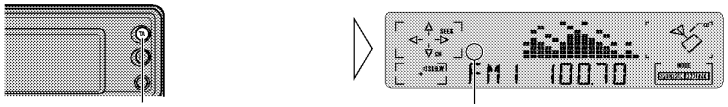


Hold for 1 second

AF Function Switching

This product's AF function can be switched ON and OFF. AF should be switched OFF for normal tuning operations.

- **Switch AF OFF.**



Hold for 2 seconds

"AF" disappears

To switch AF ON, repeat the preceding operation.

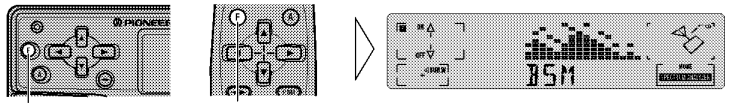
Note:

- You can also switch the AF Function ON/OFF in the Function Menu.

Entering the Function Menu

In this menu you can select tuner functions.

- **Select the desired mode in the Function Menu.**



Each press changes the Mode ...

Each press changes the Mode ...

Each press of the FUNCTION button selects the mode in the following order:

BSM → REG* → LOCAL → TA* → PTY SEL* → AF*

* REG, TA, PTY SEL and AF are RDS functions for FM bands. You cannot switch to these modes when selecting MW or LW band. Refer to "Using the RDS Functions" for details and instructions on how to use these functions.

To cancel the Function Menu, press the BAND button.

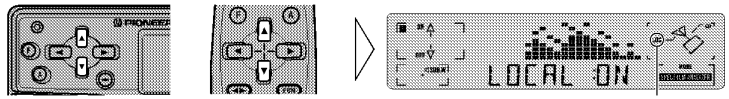
Note:

- After entering the Function Menu, if you do not perform an operation within about 30 seconds, the Function Menu is automatically canceled.

Local Seek Tuning

This mode selects only stations with especially strong signals.

1. **Select the Local mode (LOCAL) in the Function Menu.**
2. **Switch the Local mode ON or OFF.**



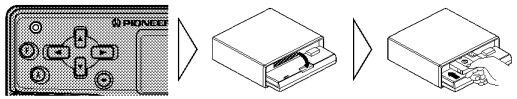
"LOC"

To cancel the Function Menu, press the BAND button.

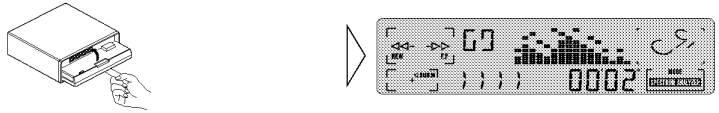
Using the Cassette Player

Basic Operation of Cassette Player

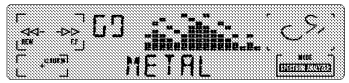
1. **Open the front panel and insert the cassette tape.**



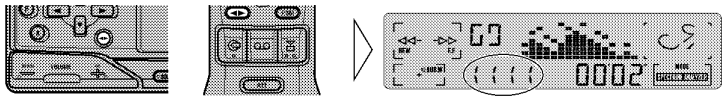
2. **Close the front panel by swinging it gently upward.**



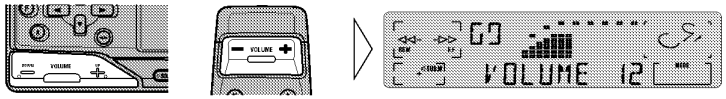
"METAL" appears on the display for 2 seconds when a metal or chrome tape is inserted. Nothing is displayed for a normal tape.



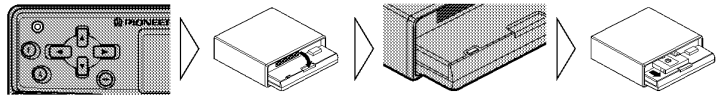
3. **Switch tape playback from side A to side B, or vice versa.**



4. **Raise or lower the volume.**



5. **Open the front panel and remove the cassette tape.**



Be sure to close the front panel after removing the cassette tape.

Note:
- The Tape function can only be turned ON/OFF with the cassette tape remaining in this product. (See page 64.)

■ Continuous Playback Time

During tape playback, the continuous playback time is displayed.
- The continuous playback time count starts at 00'00" at the following times.
  * When a tape is inserted.
  * When the tape direction is changed.
  * When you rewind the tape side currently playing back to the beginning.
- The continuous playback time count is halted at the following times.
  * When the power is turned OFF.
  * When you switch to another source.
  * When fast-forwarding/rewinding and while the Music Search function is operating.

Fast Forward/Rewind and Music Search

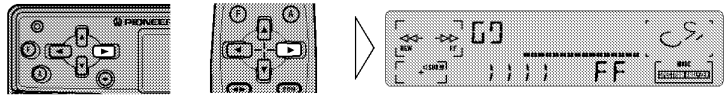
■ Fast Forward and Forward-Music Search

While "FF" is displayed, the system fast-forwards the cassette tape to the end of the current side.

While "F-MS" is displayed, the system winds the cassette tape forward to the beginning of the next song, then play begins from that point.

- **Select the desired mode in the following order:**

FF → F-MS → Normal playback

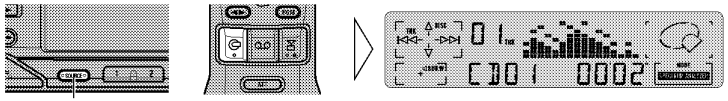


Note:
- Fast Forward (FF) and Forward-Music Search (F-MS) can be canceled by pressing the BAND button during FF or F-MS operation.

This product can control one or more multi-CD players.

Basic Operation of Multi-CD Players

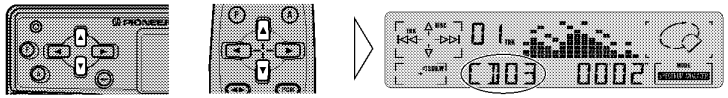
1. Select the multi-CD player source.



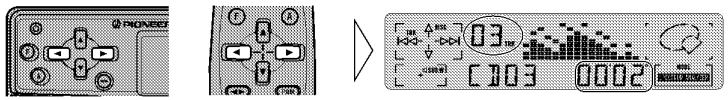
Each press
changes the Source ...

Note:
- The multi-CD player may perform a preparatory operation, such as verifying the presence of a disc or reading disc information, when the power is turned ON or a new disc is selected for playback. "READY" is displayed.
- If the multi-CD player cannot operate properly, an error message such as "ERROR-14" is displayed. Refer to the multi-CD player owner's manual.
- If there are no discs in the multi-CD player magazine, "NO DISC" is displayed.

2. Select the desired disc.



3. Select the desired track (or fast-forward/reverse, per the chart below).

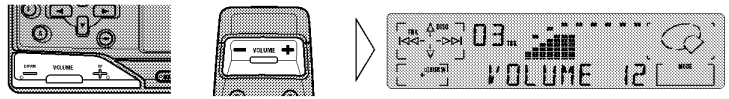


This product lets you select the track search function or fast-forward/reverse function by changing the length of the time you press the button.

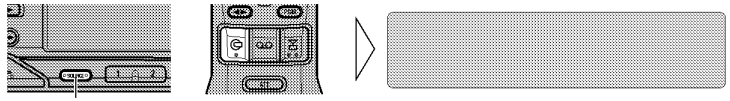
Track search	0.5 seconds or less
Fast-forward/Reverse	Continue pressing

Using Multi-CD Players

4. Raise or lower the volume.



5. Turn the source OFF.



Hold for 1 second

Playing Discs on a 50-Disc Type Multi-CD Player

When a magazine is loaded into a 50-Disc type multi-CD player, information on all the discs in the magazine is read.

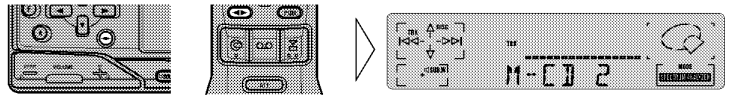
If you start playing a disc on a 50-Disc type multi-CD player before reading of information on all discs has been completed, reading of information stops part way through. This will prevent you from using a number of functions. (If you try and use these functions, "NOT READY" is displayed.)

If this happens, reading of information begins again when you switch to a component other than 50-Disc type multi-CD player.

Switching the Multi-CD Player

It is possible to connect up to three multi-CD players by means of a multiple installation adapter. When two or more multi-CD players are installed, their priorities must be specified. Follow the multi-CD player instructions carefully, and set the address switches properly.

- **Select the multi-CD player you want to use.**

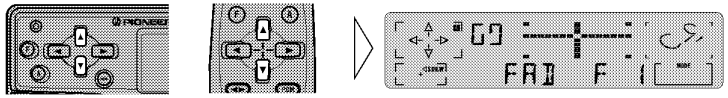


M-CD 1 → M-CD 2 → M-CD 3

Balance Adjustment

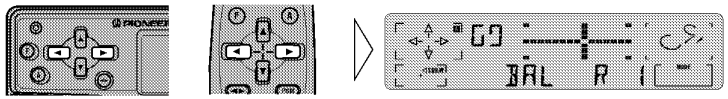
This function allows you to select a Fader/Balance setting that provides ideal listening conditions in all occupied seats.

1. **Select the Fader/Balance mode (FAD) in the Audio Menu.**
2. **Shift the balance progressively to the front or rear speakers.**



"FAD F15" – "FAD R15" is displayed as it moves from front to rear.
("FAD F9" – "FAD R9" is displayed as it moves from front to rear when a Hide-away DSP "DEQ-P800" is connected to this product.)

3. **Shift the balance to the left or right speaker, respectively.**



"BAL L9" – "BAL R9" is displayed as it moves from left to right.

To cancel the Audio Menu, press the BAND button.

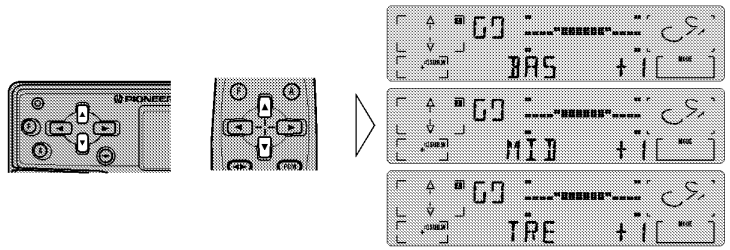
Note:
- "FAD 0" is the proper setting when 2 speakers are in use.
- You cannot shift the balance progressively to the front or rear speakers when a DSP (except the Hide-away DSP) is connected to this product.

Audio Adjustment

Bass/Middle/Treble Adjustment

This product is equipped with three tone adjustment modes, the Bass (BAS), Middle (MID) and Treble (TRE) modes. It is possible to select a different tone adjustment setting for each source.

1. **Select bass mode (BAS), middle mode (MID) or treble mode (TRE) in the Audio Menu.**
2. **Increase or decrease the intensity of the Bass, Middle or Treble, whichever is selected.**



The display shows "+6" – "–6".

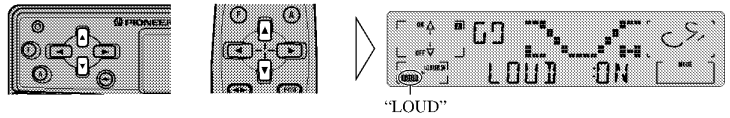
3. **Repeat steps 1–2 above for the other Bass, Middle or Treble Adjustment.**

To cancel the Audio Menu, press the BAND button.

Loudness Adjustment

The Loudness function compensates for deficiencies in the low and high sound ranges at low volume.

1. **Select the Loudness mode (LOUD) in the Audio Menu.**
2. **Switch the Loudness function ON or OFF.**



To cancel the Audio Menu, press the BAND button.

Specifications

General

Power source ..... 14.4 V DC (10.8 – 15.1 V allowable)
Grounding system ..... Negative type
Max. current consumption ..... 10 A
Dimensions
(mounting size) .... 178 (W) × 50 (H) × 150 (D) mm
(front face) ..... 188 (W) × 58 (H) × 19 (D) mm
Weight ..... 1.5 kg

Amplifier

Maximum power output ..... 40 W × 4
Continuous power output ..... 25 W × 4
(DIN45324, +B = 14.4 V)
Load impedance ..... 4 Ω (4 – 8 Ω allowable)
Preout output level/output impedance ..... 500 mV/1 kΩ
Sub-woofer output
Crossover frequency ..... 50 Hz, 80 Hz, 125 Hz
Crossover slope ..... –18 dB/oct
Tone controls
(Bass) ..... ±12 dB (80 Hz)
(Middle) ..... ±12 dB (400 Hz)
(Treble) ..... ±12 dB (10 kHz)
Loudness contour ..... +10 dB (100 Hz), +7 dB (10 kHz)
(volume: –30 dB)

Cassette player

Tape ..... Compact cassette tape (C-30 – C-90)
Tape speed .... 4.76 cm/sec. (+0.14 cm/sec. –0.05 cm/sec.)
Fast forward/rewinding time .. Approx. 100 sec. for C-60
Wow & flutter ..... 0.09% (WRMS)
Frequency response ..... Metal: 30 – 19,000 Hz (±3 dB)
Stereo separation ..... 45 dB
Signal-to-noise ratio
..... Metal:* Dolby C NR IN: 73 dB (IEC-A network)
Dolby B NR IN: 67 dB (IEC-A network)
Dolby NR OUT: 61 dB (IEC-A network)
* : KEH-P8600R/EW only.

FM tuner

Frequency range ..... 87.5 – 108 MHz
Usable sensitivity
..... 11 dBf (1.0 µV/75 Ω, mono, S/N: 30 dB)
50 dB quieting sensitivity .... 16 dBf (1.7 µV/75 Ω, mono)
Signal-to-noise ratio ..... 70 dB (IEC-A network)
Distortion ..... 0.3% (at 65 dBf, 1 kHz, stereo)
Frequency response ..... 30 – 15,000 Hz (±3 dB)
Stereo separation ..... 40 dB (at 65 dBf, 1 kHz)

MW tuner

Frequency range ..... 531 – 1,602 kHz
Usable sensitivity ..... 18 µV (25 dB) (S/N: 20 dB)
Selectivity ..... 50 dB (±9 kHz)

LW tuner

Frequency range ..... 153 – 281 kHz
Usable sensitivity ..... 30 µV (30 dB) (S/N: 20 dB)
Selectivity ..... 50 dB (±9 kHz)

Note:

- Specifications and the design are subject to possible modification without notice due to improvements.